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Revisiting Leadership in the Armed Forces*

AIR COMMODORE ASLAM BAZMI, PAKISTANI AIR FORCE, RETIRED



MANY BOOKS AND articles have extensively discussed the subject of leadership. In dealing with some of its aspects, therefore, one will likely repeat (albeit somewhat differently) what someone has already said. Basically, the essentials of good leadership in the profession of arms have changed little over the past decades. Although we still hold sound leadership in high esteem, poor leadership has become much less tolerable today and much more dysfunctional than it was 50 years ago. Rapid progress made in the modern technological era demands that present-day leaders use their abilities, attitudes, and perceptions to overcome the polarity caused by the vanity of human power and the neglect of life's pristine values.

What Is Leadership?

Leadership makes people place their faith and trust in a single leader whom they follow and for whom they are willing to give their best. Leaders must be able to inspire their followers by demonstrating superior qualities of body, mind, and character. Their success derives from inspiring their subordinates to think, feel, and act the way they do. A gift of character, leadership can be polished and improved.

Field Marshal Bernard Law Montgomery of Great Britain defined leadership as "*the will to dominate, together with the character which inspires confidence*" (emphasis in original).¹ To lead and dominate others, one must first acquire force of character tempered by energy, a sense of purpose and direction, integrity, enthusiasm, and moral courage. People look up

*Reprinted with permission of *Shaheen*, journal of the Pakistani Air Force.

to leaders and trust their judgement; leaders inspire and warm the hearts of their followers. Indeed, Field Marshal Sir William Slim of Australia viewed leadership as “the projection of personality.”² In its highest sense, leadership is the goal that all officers must continually seek if they wish to remain worthy of their rank and insignia.

Qualities of a Military Leader

The qualities that we associate with great leadership are so numerous that no one can possess all of them. The following sections briefly discuss a selection of traits typical of celebrated leaders—traits that military officers should strive to acquire.

Conspicuousness

During the period of indecisive inactivity created by an emergency, some people may begin to act doggedly and inspire others to follow them by virtue of their physical prowess, outstanding appearance, or some kind of unique attribute. Such individuals may not have thought of being leaders but simply respond to situations more quickly and assertively than others. Alternatively, leaders-to-be may consciously assume that role and make themselves conspicuous. In the armed forces, we do not have to adopt either of these methods because conspicuousness comes naturally to us by virtue of our uniforms and insignia on the one hand and, on the other, by the training that prompts all personnel to turn to those of higher rank for guidance. Officers in the armed forces should therefore earnestly strive to acquire qualities that will mature and refine their leadership abilities.

Courage

Speaking of John Churchill, Duke of Marlborough, Voltaire praises “that calm courage in the midst of tumult, that serenity of soul in danger . . . [which is] the greatest gift of nature for command.”³ Most people have physical courage but lack moral courage, which is indispensable for a leader. Moral courage con-

sists in being honest and admitting one’s mistakes when things go wrong. It shows itself in the ability to make decisions, keeping interests of the service and the country in view against personal interest or self-perpetuation. Lack of moral courage can impel persons with ostensibly strong nerves and great character to make absolutely wrong decisions. Lacking moral courage and not ready to accept defeat, Adolf Hitler cost millions of people their lives. His generals, deficient in courage, turned him into an unbridled demon. By demonstrating moral courage, a leader can avoid many a wrong decision. The ability to make an unpopular decision calls for resolution, which leaders can cultivate.

Some leaders unfairly keep themselves too much in the sun and their followers too much in the dark. Under no circumstances should commanders be vague, remote, or inaccessible. When they walk unannounced into any camp, workshop, or office, people should recognize them immediately. It is more important to be recognized than to be popular.

Moral courage requires a leader or commander to report adversely on an inefficient subordinate and to differ with a superior whose actions run counter to the best interests of the service. Like Winston Churchill, who, at the beginning of World War II, offered to oppose Germany with his “blood, toil, tears, and sweat,” a leader should not waver under stress and strain.⁴ By cultivating the virtue of moral courage and the disposition to acknowledge one’s mistakes, a leader opens up the possibility of radical reformation. After demolishing the barrier of conceit, an officer can fully discuss any problem with his or her subordinates and may often find the solution most suited to the situation.

Example

Good leaders work more than they talk, trying to become living symbols of their organization’s value system. Tactical leadership based on example and demonstration promotes group cohesion. Leaders exert an immediate and pervasive influence on those under their command. To serve as a good example to their

subordinates, they must, therefore, set for themselves a strict moral code and code of discipline. If they wish to earn their followers' respect and loyalty, they must meticulously correct their own attitude towards their superiors as well as subordinates. Quietly spoken by true leaders, a "Will you please?" commands a more immediate response than a bellow from people uncertain of themselves and afraid of their own authority.

All leaders must independently establish their own credibility. They must know their job and demonstrate that knowledge. To serve as an example means saying, "Come on," not "Go on." Officers must realize that junior officers closely note the way they talk and behave. They discuss their leaders' idiosyncrasies among themselves, comparing and contrasting them with other officers and finally passing judgement. The efficiency or poor performance of a unit or section depends in great measure on this popular assessment. Every officer, therefore, should remain extremely wary about his or her conduct.

The credibility of leaders is a strong index of their troops' high morale and unfailing loyalty, which cannot be secured by mere preaching. According to Brig Gen S. L. A. Marshall, "The doctrine of a blind loyalty to leadership is a selfish and futile military dogma except in so far as it is ennobled by a higher loyalty in all ranks to truth and decency."⁵

Leadership's reputation of firmness, competence, and fairness is an effective antidote to the pernicious "meltdown of trust" syndrome—an unfortunate phenomenon of contemporary civilization. By willingly making sacrifices, taking risks in the interest of the mission and the soldiers, and looking deeply inside to figure out what truly motivates people, a leader can cultivate and maintain a climate of mutual trust and confidence.

Integrity

In today's competitive environment, some leaders tend to abandon ethical considerations. By doing so, they stand to lose not only the respect and trust of their followers but also their

own self-esteem. The principal quality that followers look for in a leader is integrity.

Ethical and intellectual integrity calls for moral courage as well as self-analysis and self-criticism. Of all virtues, honesty to oneself is the most difficult to cultivate, but once mastered, the others follow quite smoothly. One can easily find excuses for poor performance. An analysis of these excuses would reveal that although they contain a measure of truth, people exaggerate them to justify their own conduct to themselves. If people are honest with themselves, they can be honest with others. Some members of our armed forces pay lip service to integrity when they take examinations, participate in course exercises, fill out travel-allowance/daily-allowance claims, report sick to avoid some unpleasant duty, and make confidential reports on subordinates—when ever conscience and convenience seem to conflict with each other.⁶ At the end of the workday, officers should ask themselves, "Have I earned today's salary?" This attitude will awaken dormant consciences and prod these officers to discharge their duties with a true sense of responsibility. To quote former UCLA basketball coach John Wooden, "There is no pillow as soft as a clear conscience."⁷

Officers of integrity are fearless and straightforward. They may not be adept at the art of public relations, but they are certainly dependable. They do not need to prop themselves up with such utterances as "By God!" to establish credibility; people simply love to work under their command.

Broad Vision

A person's perspective is conditioned by the amount of knowledge and understanding he or she has. A narrow outlook often creates a serious barrier to enlightened leadership. Leaders must transcend the petty confines of morbid discrimination, eschewing any consideration of branch, rank, language, sect, and so forth. Only broad vision can enable a leader to deal with a complex situation or experience, especially under trying conditions. An officer with myopic vision gets bogged down in minor issues, falls easy prey to prejudices,

and remains captive to his or her own parochial thinking.

In essence, no natural or hereditary system exists for categorizing people as either leaders or followers. Such a false conception creates arrogance and snobbery on the one hand and unhappiness and prejudice on the other. The very delicate officer-subordinate relationship requires active cooperation and a great deal of mutual giving and taking—with more giving by the officer and more taking by the subordinate.

Sense of Responsibility

Temperamentally, the leader must be ready to accept responsibility. In the present environment of specialization, people tend to confine themselves to their professional field, treating extra but necessary tasks as an unwelcome burden. In fact, those additional duties normally afford people a good background as well as an opportunity to fully develop a sense of responsibility. One of the principles of good human management entails making workers realize that any job, small or insignificant though it may seem, is important and vitally related to the end product. This understanding will give those individuals a sense of importance, belonging, and, ultimately, pride in their achievement. Thoroughness in every sphere leads to general efficiency, on which depends the effectiveness and very survival of the military in an emergency.

Creative Thinking

The desire to improve the general scheme of things is a valuable asset. People with closed minds are likely to more easily accept the existing arrangement of things (status quo) without questioning usefulness, correctness, or quality. Enslavement to the status quo can deprive people of a chance to practice the art of creative thinking. It is desirable to foster and cultivate among people the passion to improve things—even for the sake of change. Of course, this can be carried too far, but with a little careful thought, one can strike a sensible balance.

Harnessing Leisure

The greater the number and variety of interests a person has, the greater would be his or her level of satisfaction and happiness. The narrow scope of our education pushes most of our young men and women past the high school and even the college stage without inculcating any worthwhile interest in life. Allowing these people to share and enjoy varied activities outside their working hours would enable them to discover and pursue the ones they like best and, in turn, help them develop maturer and fuller personalities marked with a great sense of purpose and meaning. It would also help overcome any tendencies towards introversion and would impart a more balanced outlook, thus making such people more useful leaders and better members of the service.

Modesty

A certain amount of egoism has a definite motivating value for all human endeavors. But we should not allow the passion for power to get out of hand. All of us naturally aspire to develop a sense of individuality. A position of authority offers a rare opportunity to satisfy this urge. Unwary officers may demand too much adulation and personal loyalty, surrounding themselves with sycophants, yes-men, and “rubber stamps.” They may want their own way too much and too often, and may become too opinionated and obstinate about taking advice from colleagues and subordinates. In some cases, they may consciously enjoy a feeling of superiority and aloofness, manifesting itself in vanity, conceit, and self-pride.

A love for power and authority, although legitimate, should not unduly influence and color an officer’s behavior. It sounds shallow of an officer to say to his or her juniors, “I have 25 years’ service in this field. Are you trying to teach me?” Learning is a lifelong process. Just as “the rivers and seas . . . receive the homage and tribute of all the valley streams . . . [but by] being lower than they . . . [become] kings of them all” (according to the Chinese sage Lao Tse), so is there no harm in learning from a soldier, a sailor, an airman, or a civilian.⁸

Modesty is the key to greatness. Merchandise of good quality will sell well without publicity.

Vain, conceited, boastful, and showy leaders fail to earn respect. Modest, self-confident commanders can earn the love of their colleagues and subordinates, but those filled with exaltation and wrongheaded pride expose themselves to ridicule. A wise leader's tongue is under his mind, but a foolish leader's mind is under his tongue.

Meditation

To gain spiritual strength, leaders should set aside time to remember Allah. Meditation in the small hours of the night will soothe their souls and minds. In adversity, leaders should neither lose heart nor become despondent. Rather than becoming impatient, they should plough hard and let the seed grow into a plant, leaving its fruition to God. Those who believe in the dictum "Hard work works" and place their faith in God always remain happy and peaceful.

Group Dynamics

Wise officers do not exact obedience by sheer command. They talk of "we" rather than "I." Aware of the fine distinction between "power over" and "power with," they think of their juniors as colleagues. Despite being in positions of authority, they do not unduly concern themselves with their own importance and status. Their leadership is a happy blend of personal authority, persuasion, and inspiration. People whom they command feel honored and exhilarated by the power exercised over them. Such a unit or squadron becomes a happy and efficient community. Officers who create such a healthy environment are an invaluable asset to the service. They set a good example of mutual respect and regard, free from obsequiousness or obnoxious authority. Their followers never try to pull the wool over their eyes. Morale remains high, and life in the unit becomes a pleasurable experience.

Maintaining good relationships among the personnel working together in a unit or section is rightly considered the bedrock of loyalty and efficiency. It creates a family atmo-

sphere, marked by common joy and shared happiness. Officers genuinely interested in the personal affairs of their subordinates will receive the love and respect of their followers. Let us heed Ken Blanchard's advice: "The key to developing people is to catch them doing something right."⁹ An officer must not be miserly in administering doses of praise at appropriate intervals in order to sustain group power. A subordinate commended for a certain quality will definitely strive to live up to it.

Shrewd officers jot down and remember important details from the personal lives of their subordinates. These particulars may pertain to their dates of birth and marriage, their pastimes, the names of their children, and so forth. Commanders who call even their lowest-ranking personnel by their first names need not worry about punctuality and lack of discipline among their staffs.

Motivation

To be successful, officers should learn the art of fostering the spirit of willing cooperation in their subordinates, especially by using feedback. They should keep their people apprised of the state of affairs in the unit as well as the progress made on any matter of general interest that they have referred to higher authorities for a decision (or inform specific individuals if only they are affected).

Some officers create the spirit of competition among their personnel to promote efficiency. A system of incentives has proven very effective in motivating people to hard work. Though intangible, such incentives spur people to reach higher goals despite heavy odds. A person who feels respected and wanted will strive harder to maintain and even enhance such recognition.

Discipline

Humans have an inherent and instinctive craving for discipline. Children do not like a weak teacher or father, nor do women like a weak husband. Similarly, people in uniform also have a low opinion about a weak officer. Real discipline emanates from willing submission to someone's better judgement. Unfortunately, some airmen, sol-

diers, and sailors may not respond to the call of duty. If persuasion fails, the exercise of authority should unhesitatingly take the form of punishment, inflicted as soon as possible after a violation of rules. If investigations are necessary, they should proceed without delay.

Commanders who impose discipline in a whimsical and inconsistent manner quickly lose the respect of subordinates and lower their morale. Fair and consistent discipline, free from favoritism, is less likely to incur resentment than inconsistent discipline. Consistency does not imply that the penalty depends entirely upon the offense, without taking into account the personal history and background of the offender. Fairness requires that commanders take a lenient view of the first transgression and impose severer penalties for subsequent offenses.

Conclusion

Never before in our history have society's values and expectations been more at variance

with those that the military establishment considers indispensable. Military officers, however well trained and groomed, are not likely to practice pristine, ethical military conduct in isolation. The present sociocultural degeneration has become equally visible in the rank and file of our military service. Only an ethically sound and professionally capable leadership can stem the rot in military virtues. Facing today's complexity and austerity, our military commanders must make clear choices regarding priorities and then support those priorities with more than words.

As we select, educate, train, and then trust our budding leaders, we need to provide them a suitable environment in which to work. This responsibility essentially devolves upon the higher echelons of leadership in the armed forces. Officers must conduct themselves as role models; merely delivering sermons and finely worded speeches would achieve little. □

Notes

1. Bernard Law Montgomery, *Military Leadership*, Walker Trust Lectures on Leadership no. 8 (London: Geoffrey Cumberlege, Oxford University Press, 1946), 4.

2. Field Marshal Sir William Slim, "Leadership in Management," *Australian Army Journal* 1, no. 1 (June 2003): 145, http://www.army.gov.au/lwsc/AbstractsOnline/AAJournal/2003_W/AAJ_June_2003_Retrospect.pdf (accessed 7 January 2007).

3. Sir Edward Creasy, *Fifteen Decisive Battles of the World: From Marathon to Waterloo* (London: R. Bentley, 1851), <http://www.au.af.mil/au/awc/awcgate/readings/tfdbt10.htm> (accessed 7 January 2007).

4. "Speeches and Quotes: Blood, Toil, Tears and Sweat," *The Churchill Centre*, <http://www.winstonchurchill.org/i4a/pages/index.cfm?pageid=391> (accessed 7 January 2007).

5. S. L. A. Marshall, *Men against Fire: The Problem of Battle Command* (1947; repr., Norman: University of Oklahoma Press, 2000), 200.

6. Pakistani Air Force personnel are entitled to claim travel and daily allowances while off station on official duty.

7. Ken Blanchard, *The Heart of a Leader: Insights on the Art of Influence* (Tulsa, OK: Honor Books, 1999), 120.

8. Lao Tse, *The Tao and Its Characteristics*, trans. James Legge, Project Gutenberg, e-text no. 216, http://www.kevinfitzmaurice.com/book_lao_tzu_tao.htm (accessed 7 January 2007).

9. Blanchard, *Heart of a Leader*, 4.



Celebrating the Air Force's 60th Birthday and Presenting the Latest *Chronicles Online Journal* Article

THE US AIR Force's 2006 *Vision Document* reminds Airmen to "never forget that behind us is a proud and lasting heritage and in front of us is a limitless horizon."¹ As we celebrate our service's 60th birthday, we recall our heritage, replete with heroic Airmen, amazing aircraft and spacecraft, and world-changing achievements. Our belief that "man's flight through life is sustained by the power of his knowledge" has been part of that heritage.² Gen James H. Doolittle, one of our greatest heroes, once said, "If we should have to fight, we should be prepared to do so from the neck up instead of from the neck down."³

General Doolittle's words ring true today. Previous generations of Airmen forged our heritage from knowledge that included technical expertise, innovative doctrinal concepts, and creative leadership skills. Although all military organizations shared some of this knowledge, much of it was unique to Airmen, who operated in different domains than their brethren. In today's world, where knowledge has become the coin of the realm, Airmen must arm themselves with cutting-edge ideas about how best to apply air, space, and cyber power in defense of national interests. They also must understand how to integrate their activities with land and sea operations.

We must develop new knowledge and deliver it rapidly to Airmen who need it. During the Cold War, "throw weight" meant the weight of an intercontinental ballistic missile's payload, but we can now give the word a new knowledge-related meaning. Intellectual throw weight is

the power of hard-hitting new ideas to influence events. The contribution of *Air and Space Power Journal* (ASPJ), the professional journal of the Air Force, to our service's intellectual throw weight predates our service's birth in 1947. Now published in six languages, ASPJ has become a respected international forum for discussing the latest air, space, and cyber knowledge. On the Air Force's 60th birthday, we clearly see a limitless horizon for our service and its professional journal.

All ASPJ editions promote professional dialogue among Airmen worldwide so that we can harness the best ideas about air, space, and cyberspace power. *Chronicles Online Journal* (COJ) complements the printed editions of ASPJ but appears only in electronic form. Not subject to any fixed publication schedule or article-length constraints, COJ can publish timely articles anytime about a broad range of military topics.

Articles appearing in COJ are frequently republished elsewhere. The various ASPJ language editions routinely translate and print them. Book editors from around the world select them as book chapters, and college professors use them in the classroom. We are pleased to present the following recent COJ article (available at <http://www.airpower.maxwell.af.mil/airchronicles/cc.html>):

- Dr. Fred H. Allison, "Close Air Support: Aviators' Entrée into the Band of Brothers" (<http://www.airpower.maxwell.af.mil/airchronicles/cc/allison.html>)

The *ASPJ* staff seeks insightful articles and book reviews from anywhere in the world. We offer both hard-copy and electronic-publication opportunities in English, Spanish, Portuguese, Arabic, French, and Chinese. To submit an article in any of our languages, please refer to the submission guidelines at <http://www.airpower.maxwell.af.mil/airchronicles/howto1.html>. To write a book review, please see the guidelines at <http://www.airpower.maxwell.af.mil/airchronicles/bookrev/bkrevguide.html>. □

Notes

1. 2006 *Vision Document*, 1, <http://www.af.mil/shared/media/document/AFD-060228-054.pdf> (accessed 12 May 2007).
2. Austin "Dusty" Miller, quotation on the Eagle and Fledglings statue at the US Air Force Academy.
3. "Jimmy Doolittle: Doolittle Quotes," Pacific Air Forces, <http://www.pacaf.af.mil/library/pacafheritage/jimmydoolittle/doolittle/index.asp> (accessed 27 May 2007).



Ricochets and Replies

We encourage you to send your comments to us, preferably via e-mail at aspj@maxwell.af.mil. You may also send letters to the Editor, Air and Space Power Journal, 401 Chennault Circle, Maxwell AFB AL 36112-6004. We reserve the right to edit the material for overall length.

LEADERSHIP: AN OLD DOG'S VIEW

Excessive analogizing can sometimes become cloying, but Mr. C. R. Anderegg's "Leadership: An Old Dog's View" (Summer 2007) was so spot-on it was never in such danger. As a sled dog now closer to the end of the trail than the beginning, I appreciate the point of view Mr. Anderegg provides. It confirms work yet to be done and a satisfied rest some miles ahead. Thanks much.

Maj Mary A. Enges, USAF
Salt Lake City, Utah

Mr. Anderegg's article is excellent. As an "old dog" myself, I could relate to the way the author drew leadership analogies from the dog's experiences. I gleaned valuable insights from the article. First, adversity is only a life experience that we live and learn from for our own betterment. Second, improved leadership skills can result from that learning.

Gerald O'Neil
Defense Contract Management Agency
Boston, Massachusetts

FIT (AND READY) TO FIGHT

Author 2d Lt Nickolas Stewart makes an interesting case for hand-to-hand combat training for Air Force personnel in his article "Fit (and Ready) to Fight: Strengthening Combat Readiness through Controlled-Aggression Training" (Summer 2007). Like him, I was surprised to learn that the Air Force does not already provide its personnel basic training in unarmed combat. I agree completely that basic martial-arts training would be a useful skill for those who may need it in a combat setting. In fact, personal self-defense capabilities are important even for personnel who are not deployed. However, I am concerned that the author does not fully distinguish between martial-arts training and "real-life" combat training.

The martial arts are admirable pursuits, but none of them can adequately prepare the practitioner for the true "no-rules" environment of unarmed combat. Even the mixed martial arts' famed ultimate-fighting championship has rules that simply do not exist in real life.

(e.g., no biting or eye gouging). Perhaps least realistic of all, almost all martial-arts contests involve just two opponents whereas a real fight almost never does. I agree that martial-arts training is related to “real” fighting and that some specific martial-arts techniques may be useful, but I do not think that specific martial-arts training (e.g., Iron Tiger immersion) is necessarily the answer to the problem Lieutenant Stewart describes.

It is extremely difficult to train people in real fighting for two reasons. First, it involves techniques that can permanently maim or kill an opponent, so they are extremely difficult to practice realistically. As my instructor once joked, “I can show you the touch of death—but I can only show you once.” Attempts to train for real life often sacrifice key elements of realism and thus can instill a false sense of security in the practitioner. In the 13 years I trained in martial arts (and the six years I taught it), I found far more people who *thought* they were competent fighters than people who actually were. Second, and more importantly, real fighting is first and foremost about a mind-set and the “weapons of opportunity” that the author mentions. It is more important that a person bite an opponent, find a chair to use as a club, or be willing to take any other action to win than to have practiced a specific kick, strike, takedown, or maneuver.

Although martial-arts skills may be useful tools in a fight, the amount of effort and training required to use them effectively in combat seems excessive. In short, I would envision personal self-defense training as more closely resembling a seminar that outlines basic pressure points, strikes, and weapons of opportunity. We want someone who can execute a kick and punch effectively, know where to jab a thumb into a person, and—most importantly—always look for an improvised weapon with which to dispatch his or her opponent. A structured martial-arts program would be exceptionally time-consuming and might not necessarily translate into real-life combat skills.

Joe Carignan
Tinker AFB, Oklahoma

STRATEGIC IMPERATIVE: THE NECESSITY FOR VALUES OPERATIONS AS OPPOSED TO INFORMATION OPERATIONS IN IRAQ AND AFGHANISTAN

Perhaps one of the best articles in the Spring 2007 *Air and Space Power Journal* (ASPJ) was Col William Darley’s “Strategic Imperative: The Necessity for Values Operations as Opposed to Information Operations in Iraq and Afghanistan.” A fundamental tenet for any military operation is to understand the environment we operate in, but unfortunately we Americans continue to hide behind our ignorance of Afghani and Iraqi culture with simplistic labels. In that sense, our cultural understanding (or lack thereof) makes Vietnam comparisons to current operations far closer to the mark than many currently admit. Of course, there is probably a very fine line for potentially political issues that ASPJ covers, but at a minimum, I expect excellent critical thinking and analysis from the *Journal* and hope to see more hard-hitting articles like Colonel Darley’s in future issues.

Maj Javier M. Ibarra, USAF
Robins AFB, Georgia

Colonel Darley’s article is spot-on and long overdue. His point about American civil religion being individual liberty is accurate. I would only expand his point slightly to include the absurd adoption of political correctness, a notion that virtually paralyzes US efforts to defend itself against the attack of radical Islam. Straight talk and sober recognition of this threat are the only solution. I applaud Colonel Darley’s courage. More—not less—discussion of this issue is desperately needed.

Maj Daniel Adler, USAF
McGuire AFB, New Jersey

IS RED FLAG OBSOLETE?

I read Gary “Buch” Sambuchi’s comment in the Spring 2007 *Air and Space Power Journal* under the heading “Is Red Flag Obsolete?” As a former crew chief at Hill AFB, Utah, I am inclined to agree with Mr. Sambuchi. If one looks at past technological advances, one sees

that we relied on technology for even the most mundane air-to-air combat tasks. With this increased dependence on technology, our basic air-to-air skills decreased so much that we had to relearn them in Vietnam. I have found through the years that one cannot transform military forces without basic skills as a foundation for growth. Do we have limitations? Of course we do. We learn from these limitations by developing the ability to adapt to a changing environment filled with unknowns and strategically forecasting to meet future needs. If we look at the war on terrorism, we see that high tech cannot replace the basics of air-to-ground warfare in Afghanistan and Iraq against a low-tech enemy. Although the US Air Force's future may be in cyberspace and space operations, one cannot merely stuff a pilot into a fighter aircraft and say, "Fly, fight and win!" without having taught him the basics of air-to-air or air-to-ground combat.

Capt Steven "Schaff" Schaffhouser, USAF
*Naval Air Station Joint Reserve Base
 Willow Grove, Pennsylvania*

Editor's Note: The original article that Captain Schaffhouser and Mr. Sambuchi comment about is Lt Col Rob Spalding's "Why Red Flag Is Obsolete" (Fall 2006).

COUNTERINSURGENCY AIRPOWER: AIR-GROUND INTEGRATION FOR THE LONG WAR

I agree with what Col Howard Belote says in his article "Counterinsurgency Airpower: Air-Ground Integration for the Long War" (Fall 2006). It is about time someone stood up and said this. We are in the shape we are in now because of the Air Force's long neglect of the close air support and tactical air control party (TACP) communities. Excessive focus on strategic warfare, centers of gravity, and so forth left us unprepared and inadequately manned with the right air experts to conduct counterinsurgency operations. Rarely did I see an Air Force Weapons School graduate serving with the Army in the air liaison officer (ALO) ranks. Thanks for the article and the insight. The TACP/ALO community thanks you.

Michael "Rhino" Evans
Nellis AFB, Nevada

Each partner in multinational operations possesses a unique cultural identity—the result of language, values, religious systems, societal norms, history, and economic and social outlooks. Even seemingly minor differences, such as dietary restrictions, can have great impact.

—Joint Publication 3-16
Multinational Operations, 7 March 2007



Coalition Operations

ACCORDING TO JOINT Publication (JP) 3-16, *Multinational Operations*, “a coalition is an ad hoc arrangement between two or more nations for common action. Coalitions are formed by different nations with different objectives, usually for a single occasion or for a longer period while addressing a narrow sector of common interest. **Operations conducted with units from two or more coalition members are referred to as coalition operations**” (emphasis in original).¹ JP 3-16 adds that “US commanders and their staffs should have an understanding of each member of the MNF [multinational force]. Much time and effort is expended in learning about the enemy; a similar effort is required to understand the doctrine, capabilities, strategic goals, culture, religion, customs, history, and values of each partner. This will ensure the effective integration of MNF partners into the operation and enhance the synergistic effect of the coalition forces.”²

US military forces conduct coalition operations on a daily basis. We already enjoy close partnerships with many militaries, but our nation’s global involvement means that we need to prepare ourselves for unexpected contingencies. No one can predict the membership, purpose, or timing of the next coalition operation. We might join a coalition that includes almost any nation in the world. Operations Enduring Freedom and Iraqi Freedom involve combat and include our closest allies, but many coalitions form as humanitarian responses to natural disasters, such as the tsunami of 2004. Some of them assemble slowly, and members may join and leave; others, however, can almost literally blossom overnight. Coalitions typically involve numerous military, governmental, and nongovernmental groups not accustomed to working together. The unpredictability and complexity of these operations highlight the importance of quickly coordinating diverse organizations under crisis condi-

tions. We would do well to learn about potential coalition partners before a crisis erupts.

Coalition members can contribute tremendous resources, but the challenge lies in integrating them as efficiently as possible. Thus, careful planning based on the capabilities and needs of each partner becomes essential. Doctrine such as that found in JP 3-16 guides the basic military aspects of coalition planning, but air, space, and cyber power remain integral to practically all coalition operations; consequently, Airmen need to prepare themselves to think creatively about new situations. Although they already excel at applying their service’s distinctive capabilities, Airmen should study coalition capabilities and seek new ways to integrate international contributions. Learning about potential coalition partners is a never-ending process.

We can follow JP 3-16’s call to learn about our coalition partners by studying what they say in their professional writings. This issue of *Air and Space Power Journal (ASPJ)*, the professional journal of the Air Force, contains articles and book reviews written by authors from Brazil, France, Guatemala, Italy, Pakistan, the United Kingdom, and the United States. This diverse international cast offers a variety of perspectives on the challenges we face today. Some of these views will be familiar to *ASPJ* readers, but others may appear novel and thought provoking. Because coalitions will almost certainly remain an enduring part of the international security scene, the *ASPJ* staff dedicates this issue to advancing the professional dialogue about coalition operations. □

Notes

1. Joint Publication 3-16, *Multinational Operations*, 7 March 2007, I-1, http://www.dtic.mil/doctrine/jel/new_pubs/jp3_16.pdf (accessed 6 June 2007).

2. *Ibid.*, I-3.

The Merge

In air combat, “the merge” occurs when opposing aircraft meet and pass each other. Then they usually “mix it up.” In a similar spirit, Air and Space Power Journal’s “Merge” articles present contending ideas. Readers can draw their own conclusions or join the intellectual battlespace. Please send comments to asbj@maxwell.af.mil.

Lean Is No Flavor of the Month

RANDALL SCHWALBE*

LT COL GRAHAM Rinehart’s article “How the Air Force Embraced ‘Partial Quality’ (and Avoiding Similar Mistakes in New Endeavors)” (Winter 2006) is poignant and timely on two levels: (1) he tells the truth, and (2) he exposes the reason the Air Force has trouble accepting these gee-whiz, flavor-of-the-month improvement programs. As a manufacturing operations analyst with Boeing’s Satellite Development Center, I have given all this rhetoric considerable thought and found that Colonel Rinehart’s argument has a fundamental flaw: he confuses quality with process improvement. Yes, the latter begets the former, but design defines quality. Lean techniques produce quality products and services faster and cheaper. One can define both product and service in terms of quality (how good the service is for the price). Lean is interested only in the *cost* of quality (i.e., the amount of skill, material, and time required to provide the service or make the product—to create value, not determine it).

Total Quality Management (TQM) and Six Sigma deal with managing the resultant quality of a product and reducing *product* variability. Lean involves reducing *process* variability. Think about it: Six Sigma is a program named after the *quality capability* of a process that yields a

success rate of 99.9997 percent. In other words, out of one million opportunities for error, only three actually occur. Lean is only indirectly concerned with quality output. It focuses primarily on the elimination of waste and the flow of value within a *process* (not necessarily a project).

I disagree with the following statement by Colonel Rinehart: “The proclamation that ‘the continuous process improvements of AFSO [Air Force Smart Operations] 21 will be the new culture of our Air Force’ could just as easily have been made for the era of Total Quality Management” (34). On the one hand, TQM has very little relevance in the service sector, so its ignominy drags Lean into the depths of ridicule because of the confusion between the two terms. On the other, Lean is hugely relevant in the service sector as well as in manufacturing. Keep in mind that manufacturing consumes resources and materials to produce something, but services merely consume. Thus, Lean training and applications take on different approaches for manufacturing versus service, but, all in all, given a process and a customer, one can apply Lean.

Colonel Rinehart makes another provocative comment when he says, “But not everyone has forgotten TQM. As one retiring chief mas-

*The author is a manufacturing operations analyst with Lean Enterprise, Boeing Satellite Systems, El Segundo, California.

ter sergeant recently put it, ‘I’ve been zero defected, total quality managed, micromanaged, one-minute managed, synergized, had my paradigms shifted, had my paradigms broken, and been told to decrease my habits to seven’” (35). Notice that he never mentions Lean in this derisive statement. The only real paradigm shift needed is the true commitment by executive management to get Lean, which is merely a commonsense way of eliminating waste from processes. For everyone else, the paradigm shift consists of working and living in a Lean environment, surrounded by *pervasive* Lean thinking and a pursuit of process perfection.

Whenever I read articles or books about Lean, certain key phrases indicate whether or not the author has thoroughly considered the principles or is merely parroting other works. For example, suppose someone suffers from a severe rash in three areas of his or her body. This person’s mission in life is to “maximize value and minimize waste in [all] operations [(processes)]” (34). Therefore, to maximize the quality of life, he or she selects two of the three major rash areas and applies therapeutic ointment, thus attempting to minimize waste but not *eliminate* it. This may sound like picayune wordsmithing, but the array of inaccurate or misleading statements in the name of Lean is one of the primary reasons that people disdain it. Moreover, would our chief master sergeant mind living with the reduced rash? Those who tolerate unreasonable regulations do precisely that. Lean is the total absence of “irrational” policies and regulations.

“The Four Pillars of Partial Quality” section of Colonel Rinehart’s article seems a bit bizarre. I became exhausted just reading through what amounts to simply another unwitting testimony that focusing on manufacturing-centric quality in a service environment merely encourages inane behavior and produces more fodder for Lean critics. Does not using a wrench to drive a nail invite criticism?

Finally, Colonel Rinehart demonstrates how success blinded US companies to the need to stay globally competitive. It is taking almost forever (over 50 years and counting) for executive managers of most important companies

to wake up and seriously smell the competition. Consider the Toyota Production System in terms of how it makes changes (the scientific method that is just as important as the change itself) and how management and the workforce cooperate within a company. Production analysts of major firms study, analyze, fret over, and mimic Toyota’s system but continuously come up short. Many blame this gap on our cultural differences. To a degree this is true; however, each individual—particularly those in power—can make daily choices that will collectively close that gap. In the meantime, Toyota has just displaced Chrysler as one of the Big Three automakers (in terms of US sales) and is gunning for Ford this year.

Hopefully, with the guidance and spirit of AFISO21, we will all learn how to avoid repeating the mistakes that have plagued previous improvement initiatives. However, have we truly explained what Lean is and how it applies to the service sector? As a case in point, if a series of tasks or planned activities produces a *unique, deliverable item* by a predetermined deadline, we call the event a *project*. As mentioned before, Lean does *not* have a direct impact on a project. However, if a task within a project is process-centric, then Lean can have a direct impact on *that* task. This matters because, all too often, managers plan projects (to get something done) and try to infuse Lean at the same time. Lean has virtually no effect on projects as a whole, so recklessly thrusting it on a project simply gives birth to more naysayers. Conversely, if managers focus Lean on a particular task that behaves like a process, then it will have a direct impact. Of course, if a management team is setting up a production line or service operation, then Lean plays a significant role in establishing the strategy to get the most value for the least amount of resource consumption.

Most importantly, we must avoid confusing these three business strategies: quality programs, project-management techniques, and Lean initiatives. Rather, we should concentrate on applying simple Lean principles on bona fide processes and maintain a balanced focus on functionality and producibility (making things easier to build) during the design

effort. Doing so will produce a dramatic drop in the cost to get quality or more quality for the price. So step back, take a deep breath, and persuade Air Force "management" to agree to listen to recommendations from the

rank and file about adjusting policies and directives in order to eliminate unnecessary activities. □

El Segundo, California

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Staying in Touch

COL STEPHEN SCHWALBE, PhD, USAF*

THE DEPARTMENT of Defense (DOD) has not positioned itself to efficiently and effectively exploit continuing personal relationships between its military officers and international officers. Although the department spends millions of dollars every year to encourage the development of lifelong friendships among these individuals, it currently has no mechanism to track such relationships. Given the current environment, having a “foreign-friendship” database of international officers who could provide assistance during a crisis (from resolving the arrest of an Airman to facilitating overflight permission) would prove quite useful.

RAND analyst William McCoy Jr. concludes that “military officers believe that the primary reason the United States trains foreign military personnel is to establish military-to-military relationships that may be useful in times of crisis.”¹ For example, in fiscal year 2002, the DOD oversaw the spending of \$70 million for its International Military Education and Training (IMET) program, which involved over 10,000 foreign military students in the United States.² By establishing IMET, Congress intended to “encourage effective and mutually beneficial relations . . . between the United States and foreign countries.”³ The program’s objectives include developing “rapport, understanding, and communication links” with students likely to hold key positions in their home country’s government. The DOD, then, seeks to use IMET as “an instrument of influence” by establishing foreign friendships with American officers.⁴

However, when a need arises, how would DOD leadership determine which American officers personally know particular foreign of-

ficers? Currently, we have no mechanism in place to make that determination. The colleges within Air University keep separate databases on international officers who have attended in residence. However, they do not indicate the status of any relationships between them and their American classmates. Because of the critical nature of foreign-language capability, however, the Air Force began conducting voluntary, servicewide surveys in 1996 to identify personnel with linguistic proficiency and recorded the results in the Foreign Language Skills Assessment (FLSA) database, resident on the virtual Military Personnel Flight Web site. This information allows Air Force leaders to easily identify Airmen who have language training.⁵ The DOD and Air Force need a similar means of tracking voluntary data regarding active friendships with foreign officers.

Because of his involvement with Pakistan’s special forces during the Soviet invasion of Afghanistan, Pervez Musharraf became close with many senior US military officers. When Musharraf seized power in Pakistan in 1999, Pres. Bill Clinton called him to find out what was going on. Instead of returning the call, Musharraf contacted Gen Anthony Zinni, USMC, with whom he had worked during the Kargil war with India earlier that year.⁶ Numerous examples, not all involving American flag officers, clearly demonstrate the need to institutionalize this information so the United States can fully exploit such relationships. Foreign officers or officials may offer assistance purely of their own volition, partly based on the strength of their ties with the US officer. Although these types of relationships are probably common among senior officers in

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the DOD, no one really knows enough about them to analyze and take advantage of them.

As a caveat, such a friendship database program should not become the responsibility of the intelligence community even though it has a wealth of experience with this kind of information. Nor should it come under the purview of the Office of Special Investigations, a situation that might deter US officers from volunteering data about their foreign friendships. Rather, responsibility should fall to the Office of the Deputy Under Secretary of the Air Force for International Affairs (SAF/IA), which directs the service's international programs, activities, and policies. That agency fulfills its mission by managing the Air Force's security assistance, armaments cooperation, and international programs (such as IMET), and by conducting comparative weapons analyses. Working closely with many foreign officials, SAF/IA selects Airmen to work in US embassies abroad as part of either the Defense Attaché Office or Security Assistance Office.

As such, it is the most appropriate organization to manage the proposed database.

Periodically, SAF/IA could send out a tasking to all Air Force officers, asking them to submit voluntary information about any ongoing relationship with a foreign officer or official and to respond to a variety of questions designed to evaluate the strength of their ties. Similar to the numerical range utilized by the FLSA database, a "1" could represent infrequent contact (e.g., only an annual holiday season's greeting), and a "5" could indicate almost daily correspondence. Such information would allow DOD leadership to communicate with and request assistance from the appropriate US officers.

Although SAF/IA has contemplated establishing a foreign-friendship database for some time, that office has not applied the necessary resources. This article advocates the development and execution of such a repository as soon as possible. □

Maxwell AFB, Alabama

Notes

1. William H. McCoy Jr., *Senegal and Liberia: Case Studies in U.S. IMET Training and Its Role in Internal Defense and Development*, RAND Note (Santa Monica, CA: RAND, 1994), 3.

2. Actually IMET receives its funding from the Department of State's international-affairs budget.

3. "International Military Education and Training (IMET)," *FAS: Federation of American Scientists*, <http://www.fas.org/asmp/campaigns/training/IMET2.html>.

4. Ibid.

5. Unfortunately, the database is not comprehensive, storing information offered voluntarily by only active duty Airmen (not those in the Guard or Reserve). See the virtual Military Personnel Flight Web site at <http://www.afpc.randolph.af.mil/vs>.

6. "Pervez Musharraf," http://pervez.musharraf.net/Pervez_Musharraf.htm.

Reply to “Maj Gen William ‘Billy’ Mitchell: A Pyrrhic Promotion”

LT COL DONALD G. REHKOPF JR., USAFR*

LT COL WILLIAM J. Ott’s “Maj Gen William ‘Billy’ Mitchell: A Pyrrhic Promotion” (Winter 2006) is a well-researched, balanced, timely article, but does it go far enough in relating a meaningful message to readers of the professional journal of the Air Force? In today’s “zero-tolerance” service, Mitchell’s conviction by general court-martial would have doomed more than his career. His subsequent resignation would have been approved—but under “other than honorable” conditions. Even had he not resigned and had a benevolent chain of command allowed him to remain, he would have received (a) a referral officer performance report (further damaging his career), (b) an unfavorable information file, and probably (c) a special security file, which would have revoked (at least temporarily) any security clearance/access he might have had. Absent a pardon, no one in today’s Air Force would (or could, if he or she valued his or her career in the “judgment” category) support a subsequent promotion. Indeed, today Mitchell also would almost certainly face a “grade determination” by the secretary of the Air Force prior to acceptance of his resignation or approval of his retirement.

I point this out, not because I advocate lowering the standards expected of officers but to put things into context. Regardless of Mitchell’s accomplishments, both in combat and in the development of air doctrine, it is simply inconceivable today that a man convicted under a general court-martial—who would lose his

right to vote in some states, among other legal restrictions—would have a building at a service academy named after him. After all, does that not amount to rewarding crime in general and insubordination in particular? Indeed, in 2005 the former judge advocate general of the Air Force, a major general, was relieved of his duties, punished under Article 15 of the *Uniform Code of Military Justice*, and “retired” at the grade of colonel.¹ How could an intellectually honest officer support a belated promotion for Mitchell—validly denied him while on active duty, as Colonel Ott aptly demonstrates—yet at the same time support (or even just live with) a zero-tolerance standard for our current officer corps?

But this is not an either/or dichotomy. Ensign Chester Nimitz’s conviction by general court-martial for dereliction of duty occurred at the beginning of his illustrious career, but, although it placed a bump therein, this setback obviously did not prevent him from ultimately becoming admiral of the Navy. Like Mitchell’s, Nimitz’s career probably would not have survived in today’s military either. Compared to Mitchell’s conviction, however, Nimitz’s does demonstrate the value of “individualized justice” and the need for placing such matters in the perspective of the service. Thus, although we may have our own opinions about the propriety of legislation that authorizes Mitchell’s promotion, Colonel Ott’s article serves a vital purpose in both educating readers about this issue and demonstrating that “honoring” our heroes involves more than a

*The author is presently assigned to the Inactive Ready Reserve. He previously served on active duty for five years and as an individual mobilization augmentee for 21 years as an assistant staff judge advocate.

successful public-relations campaign in Congress. We can only hope that the people charged with giving advice in this matter take into account the ramifications of their recommendations. □

Rochester, New York

Note

1. Air Force Print News, "AF's Former Top Military Lawyer to Retire in Reduced Rank," 10 January 2005, *Air Force Link*, <http://www.af.mil/news/story.asp?id=123009569> (accessed 8 March 2007).

The graphic features a dark, textured background with a faint world map and binary code. The title "AIR & SPACE POWER JOURNAL" is prominently displayed in a large, bold, white serif font. Below the title, the words "Free Electronic Subscriptions" are written in a large, bold, white sans-serif font. At the bottom, there is a paragraph of text in a smaller white font, followed by a URL in a bold white font. The entire graphic is framed by a thin white border.

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The “Hyphenated Airman”

Some Observations on Service Culture

LT COL D. ROBERT “BOB” POYNOR, USAF, RETIRED*

WHEN I ENTERED the Air Force in the early 1970s, I could relate to my job on several levels. First, I was an Airman, part of a military service with a proud and powerful, yet short, history. Second, I was part of Strategic Air Command, Gen Curtis LeMay’s formidable shield that protected America from the commie horde. Third, I was a missileer, a trigger puller in a job with little tolerance for error. Finally, I identified with my squadron; we were the “Odd Squad,” with a different weapon system than the other three squadrons in the wing, a situation that lent itself to an unusual degree of camaraderie.

This self-identification on several levels is not unusual. Within any given population, a common identity will arise with which the group identifies. This cultural identity serves to bind its members together and is part of normal socialization. There’s nothing intrinsically bad about any of this—again, it’s quite normal behavior.

Problems can emerge when people identify themselves too strongly with one of the lower-level identities at the expense of a larger group identity—a phenomenon called “tribalism.” I believe that tribalism in the Air Force—identification with one’s career field—has recently become too strong and in fact interferes with the average Airman’s ability to identify with the overarching Air Force culture and mission. Arguably, this also may have deleterious effects when it comes to thinking about war fighting.

Many younger Airmen don’t see anything wrong with their embrace of tribalism within the service. After all, multicultural tribalism, which in our society results in the “hyphenated

American,” is just part of the background noise in contemporary American society, especially for those who grew up from the latter 1980s onward when this phenomenon became prevalent. Having been raised in it and absorbed it, many young Airmen feel at ease identifying with groups. However, tribalism can be anathema to military culture. In order to explain why this is an issue within the service, we must first look at how and why this phenomenon appears in society. (What follows is a thumbnail summary gleaned from numerous readings. Readers may disagree with my viewpoint.)

Multicultural tribalism is a contemporary manifestation of cultural Marxism, which in its original model consciously sought to delegitimize and eventually destroy capitalist Western society. One key method entails chiseling away at national cohesion by fostering divisions among the population. Initially this division followed classic Marxism by emphasizing economic differences; more recently, it has expanded to include other criteria, most notably race, gender, and ethnicity. Emphasizing differences between tribes thus becomes politically useful since achieving national consensus becomes more difficult. Closely allied with tribalism is the process of establishing the political value of grievances against the “dominant culture”—usually interpreted in the United States as white, male, and Christian. This victimhood seeks redress of perceived grievances of the past through mandatory restructuring of society, usually through proportional representation (i.e., quotas) of “oppressed” groups. This approach attacks the classic liberal notion of achievement through merit and emphasizes equality of outcomes, not opportunity.¹ It also erodes confi-

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dence in the nation to govern fairly, thus aiding the goal of delegitimization.²

How does this admittedly dense foray into social politics affect the Air Force? Airmen are products of the culture in which they were raised; thus, they unconsciously bring with them into the service some of the background social issues they've absorbed, so identification with a tribe in the form of a career field doesn't seem unusual.

This is exacerbated by dramatic changes in career-field demographics that have occurred since the Air Force's inception. When the Air Force was established, its main mission was flying. Every Air Force base had a runway, and the service had literally thousands of aircraft of all types. Because no one was very far from "the sound of freedom" coming off the ramp, everyone could easily relate to the unofficial Air Force mission of flying and fighting. Since those early days, however, the number of aircraft has declined dramatically as each platform became more effective. Also, as technology expanded, entirely new career fields grew up, most noticeably space- and information-related specialties, as well as other increasingly sophisticated support functions. Thus, over the past few decades, fewer and fewer Airmen related directly to flying operations, and the number of pilots, who comprise our warrior class and previously held most leadership positions, dropped correspondingly.

Aggravating this picture is the Air Force's tendency to identify with technology instead of a unifying theory of war and to organize in peacetime around technological stovepipes.³ Airlifters identify themselves with Air Mobility Command, fighter pilots with Air Combat Command, space personnel with Air Force Space Command, and so forth. However, the Air Force's war-fighting organization is the air and space expeditionary task force, comprised of forces tailored for a specific mission. Apparently, the Air Force begins thinking in terms of something approaching a combined-arms model only when it actually goes to war.

Arguably, the service's changing view of itself has not helped. For most of its early existence, we talked of "airpower." Around the 1990s, we expanded the vision to "aerospace power" in recognition of the increasing value of space and, later, information power. In 2001

the Air Force shifted to "air and space power," supposedly (in classic multicultural language) to "acknowledge the inherent differences in the two media and the associated technical and policy-related realities."⁴ The Air Force now talks about "Air, Space, and Cyberspace."⁵

These changes have implications for how Airmen think about applying their capabilities. Of all the services, only the Air Force lacks an organic-employment paradigm in which its forces function in some sort of combined-arms model. Instead, we tailor our force packages and provide them to the joint force commander through a joint force air component commander. Even so, the Air Force is trending toward functional stovepiping in organization and employment. US Transportation Command centrally manages intertheater air mobility, the latter represented in-theater by a director of air mobility forces; similarly, US Strategic Command centrally manages space capabilities, represented by a director of space forces. In emerging discussions about cyberspace, some people have suggested centrally managing all cyberspace forces and perhaps presenting them through a director of cyberspace forces. I recently read a suggestion for a "director of unmanned aerial systems" to represent *that* community (admittedly, I'm not sure about the seriousness of that last suggestion). I have also reviewed a proposal from the other services' medical communities to create their own US Medical Command (strongly resisted by the Air Force's medical community). In each instance, a functional stovepipe is forming to optimize some aspect of operations and organization.

Another occasionally heard argument supporting some of this stovepiping concerns the complaint that "pilots don't understand what we can do"—the in-service manifestation of the victimhood meme mentioned previously as another aspect of cultural Marxism. It has no place in the Air Force, but the fact that it comes up at all offers another indication of how deeply those entering the service have internalized the hyphenated-American model.

An unfortunate consequence of these tribal arrangements is that these stovepiped capabilities, with their associated command and control, may be severable from the commander of Air Force forces (COMAFFOR) and plugged

anywhere into a joint force. This presents the possibility of a lack of unity of command of Air Force capabilities because they could be penny-packaged out across a joint force, leaving the COMAFFOR with only regionally based, fixed-wing strike forces. It amounts to optimization at the tribal level at the expense of the larger institution. This profound challenge to how the Air Force organizes and presents forces is happening without the institutional scrutiny I believe it warrants.

A key part of solving the Air Force's fractured self-vision involves a conscious return to a unifying concept about what the service offers to the nation. Instead of stringing more and more adjectives together (i.e., air, space, and now cyberspace), we should return to simply "airpower" and define it as something more unitary. In short we must stop institutionalizing tribalism by offering an easily grasped vision that binds all Airmen together.

(I'm not saying that all tribalism is bad. At the micro level, identification with a unit is certainly healthy, especially in combat forces, for building esprit and fostering teamwork. I see the problem at the macro level, when Airmen try to articulate what airpower presents. Too frequently, tribalism gets in the way.)

In fact, the Air Force is investigating such a unitary model in the current revision of its basic-doctrine publication. However, the service appears on the cusp of taking the expedient path with a proposed airpower definition that con-

veniently links to its new mission statement, defining airpower as "the synergistic application of air, space, and cyberspace capabilities to project global strategic military power."⁶ This is a case of one step forward, two steps back. By explicitly linking the definition of airpower to the three domains of the mission statement, the Air Force again identifies itself with technological stovepipes—and in terms of a very contemporary view.

I suggest that the Air Force devise a definition of airpower that encompasses the broad concepts which underpinned the original rationale for a separate service—something along the lines of "exploitation of the vertical dimension of the operational environment to leverage elevation, speed, range, and transparency to project national power at long ranges and on short notice." Such a definition should explain what Airmen do as well as how and why they apply military power. Arguably more timeless than something that speaks in terms of current trendiness, it should not tie itself to the technological solution of the moment.

Before the Civil War, people thought of the United States as a collection of separate entities—"the United States *are*. . . ." After the war, the perception changed to a unitary whole—"the United States *is*. . . ." The question for the Air Force becomes whether we are a collection of tribes or some unitary whole—Airmen. If the latter, what is the overarching expression of our identity? □

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Notes

1. One should not confuse the philosophical notion of classical liberalism (with a small "l") with the current political manifestation of Liberalism (with a capital "L"). Classic liberalism stresses "the importance of human rationality, individual property rights, natural rights, the protection of civil liberties, constitutional limitations of government, free markets, and individual freedom from restraint." Cultural Marxism has co-opted the contemporary usage of Liberalism into the opposite of its original meaning—"a revival of the very policies of state intervention and paternalism against which classical liberalism fought." *Wikipedia: The Free Encyclopedia*, s.v., "Classical Liberalism," http://en.wikipedia.org/wiki/Classical_liberalism.

2. For example, see a summary of John Fonte's article "The Ideological War within the West" at *American Diplomacy*, 10 June 2002, <http://www.unc.edu/depts/diplomat/>

archives_roll/2002_04-06/fonte_ideological/fonte_ideological.html.

3. See Carl H. Builder, *The Icarus Syndrome: The Role of Air Power Theory in the Evolution and Fate of the U.S. Air Force* (New Brunswick, NJ: Transaction Publishers, 1994).

4. "Terminology," *Doctrine Watch*, no. 18 (15 August 2002), <https://www.doctrine.af.mil/afdcprivateweb/DoctrineWatch/DWArchive.pdf>.

5. Gen T. Michael Moseley and Michael W. Wynne, "SECAF/CSAF Letter to Airmen: Mission Statement," 7 December 2005, <http://www.af.mil/library/viewpoints/jvp.asp?id=192>.

6. Based on discussion during the current revision of Air Force Doctrine Document (AFDD) 1, *Air Force Basic Doctrine*, 17 November 2003.



The Sputnik Legacy

50 Years in Retrospect

LT COL JOHN E. SHAW, USAF

FOR ITS SMALL size, the metal sphere that hurtled into Earth orbit 50 years ago on 4 October 1957 has had an extraordinarily large influence on human events. Sputnik produced the immediate effect of great pride for the Soviet Union and great embarrassment for the United States. The communist nation supposedly so far behind the Western allies had shown the world the formidable nature of its technology and, therefore (by the logic of the day), its ideology. Neither could anyone escape the reality that, now, no part of the United States lay beyond the reach of Soviet missiles.

As the immediate shockwave of Sputnik dissipated, however, the longer-term effects, ironically, began to run counter to Soviet expectations and interests. First, in the tradition of the USS *Maine*, the RMS *Lusitania*, and the USS *Arizona* (and, of course, the broader attack on Pearl Harbor), the iconic “vessel” named Sputnik galvanized American will and enhanced determination—political, technological, and cultural—to settle for nothing short of victory in space. The first “victory” campaign there came to be defined—through implicit agreement between the superpowers by their resource commitments and focused efforts—by the race for the moon, ultimately won by the United States in 1969 but contested up to the very last by the Soviet Union.

Second, Sputnik resolved the simmering issue of satellite overflight. Could satellites pass over nations unopposed whereas aircraft could not? The Soviets’ haste to beat the Americans into space with Sputnik settled the issue before it could even become a matter of significant dispute. Having boasted of Sputnik, which passed over the United States several times a day and even became visible at twilight

to the American public, the Soviets could hardly object to later overflights of their own territory by US satellites. This de facto resolution of the overflight problem worked to American advantage as time wore on since spaceborne assets became the most reliable and effective capability for collecting intelligence on the increasingly hermetic Soviet Union.

But today, from our vantage point of 50 years, perhaps the most significant effect of Sputnik involved not what it led the superpowers to do but what it distracted them *from*—specifically, direct conventional or even nuclear confrontation. The Soviet satellite kicked off what we might call the “Great Space War.” With the race for the moon, the subsequent dueling of spy satellites and space stations, and the culmination in confrontations over the Strategic Defense Initiative, this became a form of surrogate warfare in the Cold War era—a stage on which the superpowers could pit resources, ideologies, and wills against each other in a manner far less deadly than open warfare.

As we look back at Sputnik’s legacy, we can reasonably ask what will take the form of the next “Sputnik” in the medium of space. What event will produce a similar galvanizing of will and focusing of effort on the part of US national-security space efforts? Will an announced Chinese lunar (or possibly Martian) mission or even a “Space Pearl Harbor” that devastates US space capabilities become the next catalyst for a discontinuous leap in effort, focus, and capabilities? The lessons of Sputnik—the first salvo fired in the human attempt to exploit the space medium—remain relevant as we seek to chart the proper course for the control and exploitation of the ultimate high ground. □

To Learn More . . .

Dickson, Paul. *Sputnik: The Shock of the Century*. New York: Walker and Co., 2001.

McDougall, Walter A. *The Heavens and the Earth: A Political History of the Space Age*. New York: Basic Books, 1985.



Editor's Note: PIREP is aviation shorthand for pilot report. It's a means for one pilot to pass on current, potentially useful information to other pilots. In the same fashion, we use this department to let readers know about items of interest.

A New Form of Air Warfare

LT TIM LARRIBAU, FRENCH AIR FORCE*

ON 11 SEPTEMBER 2001 (9/11), four American commercial airliners were hijacked by 19 fanatical Muslim terrorists. Three of the planes hit the twin towers of the World Trade Center in New York City and the Pentagon in Washington, DC. The fourth crashed in the Pennsylvania countryside. Everyone remembers the dreadful images of this new form of warfare that has locked the world in a gruesome fight against a very inventive breed of international terrorists.

Many people have commented about the tragic events of 9/11. According to one widespread idea, Western-style warfare, based largely on aviation, space, and high technology, is no longer effective against these new threats. Infantrymen and other ground-minded soldiers can indeed find attractive the idea of going back to a more traditional style of warfare based on human intelligence and close combat with an enemy smart enough simply to refuse to engage in Western-style warfare. This idea relegates air forces and airmen to a supporting role in the broadest sense of that term, bringing to the forefront the personal qualities of infantrymen who will confront this new

nontechnological, but nonetheless effective, threat. However, we can consider the 9/11 attack not only from the terrorist perspective but also from an air-warfare perspective. Considering the attacks in this manner, we must acknowledge that the principles of aerial warfare remain a forceful reality and that, as in 1918, we must start by winning the air war in order to have hope of prevailing on the ground, even if the air war has taken an unexpected turn.

Indirect Air Superiority

On 9/11, most journalists and commentators saw only the human tragedy that was occurring and perceived few of the reactions it would trigger. However, some people spoke of airliners transformed into manned flying bombs. For military aviators, this notion has a heavy meaning. It is indeed from this perspective that we must consider the 9/11 attacks.

Unable to launch conventional military weapons against their targets, the terrorists commandeered commercial airliners, camouflaged as disoriented civil aircraft until the point of impact. Apart from the fact that they

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were indeed civilian airliners filled with passengers, we must understand that the terrorists succeeded in flying four powerful bombs in US airspace and that three of them reached their designated targets unimpeded by Americans. The power of these bombs derived from the aircraft's impact speed and fuel capacity. Burning aviation fuel attains temperatures of several thousand degrees, lethal for any infrastructure or building, let alone human beings.

The hijacking of the airplanes, the time it took authorities to understand that a serious problem existed, and the absence of procedures for handling this situation generated a particularly strong sense of surprise. Even if they had known of a terrorist attack within their airspace, Americans could not imagine its nature and therefore could not adapt and respond adequately.

In terms of air warfare, the first lesson learned concerns the fact that Americans really did temporarily lose air superiority, with tragic consequences. During several dozen minutes, the US military and civilian air authorities found themselves in a state of uncertainty and, at best, in an inadequate defensive posture. Just a momentary loss of air superiority proved enough to cause terrible losses.

A dear concept to airmen (often accused of dogmatism on this matter), air superiority therefore remains the decisive element of large-scale military action, even if it must confront heretofore unexpected aspects. Air superiority assumes more importance than ever as we now recognize some nonmilitary, indirect ways of challenging an enemy's airpower. These insidious new ways no longer require a large-scale aerial confrontation, as in the Battle of Britain, but lend themselves perfectly to asymmetric conflicts.

Today everyone accepts the fact that since the end of the Cold War, the airpower of Western countries—first of all, that of the United States—remains impervious to any challenge by a conventional strategy and sizable air force. The United States possesses extensive aerial experience and pursues sustained technical and doctrinal developments in this field. Its alliances and military cooperation with the North Atlantic Treaty Organization and espe-

cially the Israeli Air Force help maintain and renew this status. Furthermore, since Russia and China do not represent severe threats, no entity today possesses sufficient aerial and military means to challenge America's airpower. Any terrorist group or rogue state, therefore, can use aerial hijacking quite effectively as an asymmetrical mode of action.

The Military Challenge of Hijacking

Therefore we must no longer view the hijacking problem as only a terrorist action that concerns the civilian population but as a direct assault on the air superiority we claim to keep over our skies and air routes. A hijacker seeks to seize air superiority in a temporary but irreparable way, and we must vigorously oppose this seizure of control, regardless of the hijacker's ultimate intentions. To the extent that hijackings take on a military dimension, the Air Force should undoubtedly think about the problem and work with police and homeland-security services to provide authorities with adequate solutions and procedures.

Because each civil aircraft is susceptible to becoming a piloted bomb, the struggle for air superiority begins very early with passenger control and close monitoring of airline companies, airport zones, and the companies and people who work at airports. Airline flight crews must also become more than mere pilots and flight attendants. They must be cognizant of the military dimension of hijacking. Perhaps we must also modify the recruitment and training of flight crews to incorporate a true military-defense aspect aboard airliners. Most transatlantic vessels of the seventeenth and eighteenth centuries carried companies of soldiers—ancestors of modern-day marines—in charge of police duties on board the ship and of its military defense in case of attack. These vessels also carried enough weapons and munitions to enable the sailors themselves to participate in the defense of their ships. Likewise, airline flight crews must be able to mount a coherent response to a hijacker's attack.

Obviously, nothing can absolutely prevent a well-prepared terrorist group from taking control of an aircraft. Religious conviction or ideological fanaticism, coupled with lengthy paramilitary training and meticulous military preparation of the operation, can produce a level of efficiency that will prove hard to counter with only flight crews and technical personnel instead of security professionals. We have indeed considered placing armed and trained security agents, such as police officers or marshals, on board, but this solution alone will not suffice. For terrorists, the presence of a security agent represents nothing more than an additional factor to integrate into attack planning, and they can certainly envision countermeasures to the agent's predictable reaction.

The key to resisting an airplane hijacking lies in gaining time and multiplying obstacles that can delay hijackers who attempt to seize control of aircraft. Reorganizing duties inside the aircraft by pairs, small groups, and, finally, by the entire commercial flight crew should permit personnel to implement a graduated series of specific procedures and responses to provide enough time to inform authorities about events and take at least elementary measures in coordination with competent authorities. A recurring series of obstacles, both human and procedural, becomes equally dissuasive because it forces assailants to lengthen their preparation time and multiplies their risks.

Sadly, we must also anticipate the case in which hijackers still manage to take control of an aircraft in flight. The lessons of 9/11 leave very few choices about which course of action to take. Even the temporary loss of air superiority can have dreadful consequences on many levels. Hijackers must never enjoy freedom of action in the air, no matter their intentions. Because of the very short response time, we must put rapid procedures in place either to force the plane to land as quickly as possible or simply to shoot it down. This way of thinking does not give much priority to passenger life and well-being, but we must not allow an uncontrolled or hijacked airplane to fly at will in our skies.

In the case of aircraft hijacking, as in conventional warfare, we must gain and keep air

superiority. If we lose it, we must spare no sacrifice or effort to recover it. The Battle of Britain, the Yom Kippur War, and 9/11 all show the necessity of maintaining air superiority at any cost.

Significance of the 9/11 Target Selection

Once they had acquired freedom of action in American airspace, the terrorists executed their prepared plan of simultaneously attacking four targets on the US east coast. The choice of these targets gives food for thought in that it corresponds to familiar concepts of Western air strategy. The first two aircraft hit the twin towers of the World Trade Center—business buildings that housed numerous banks and financial enterprises. Located in the business district of New York City, America's economic and financial capital, the towers were surrounded by hundreds of similar structures, not far from Wall Street's famous New York Stock Exchange, which exerts a leading influence on Western and world economies.

The third plane hit the Pentagon, the huge, legendary military complex that holds the Department of Defense; Joint Chiefs of Staff; headquarters of the US Air Force, Navy, Army, Marine Corps, and Coast Guard; and hundreds of departments and operations centers essential to the leadership and management of the US armed forces as well as the defense of US interests worldwide.

Many people have speculated that the fourth plane, which crashed in the Pennsylvania countryside, targeted either the White House or the Capitol in Washington, DC. The former, the American equivalent of the French Palais de l'Elysée, is the home and workplace of the president of the United States—head of the federal government, responsible for national defense and foreign affairs, among other things. The White House therefore houses the highest-level American policy maker. The parliament building of American politics, the Capitol contains the House of Representatives and the Senate—two chambers that represent

the American people, charged with controlling government actions and legislation.

We could easily add the initial victim of the attacks as a fourth target—the population. By definition, terrorism assaults civilian populations to create fear and lead to actions guided by fear. Although no aircraft specifically targeted residential areas, the terrorists obviously planned to inflict a massive human toll. In sum the terrorists took aim at (1) the economic structure of the United States and perhaps world commerce, (2) the military leadership, (3) the political organization, and (4) the civilian population.

Thus partitioned, this target list resembles not only the classifications designated by several air strategists, but also some events in the history of air warfare. The first to write about the psychological effects of subjecting civilian populations and large cities to strategic bombing, Italian general Giulio Douhet asserted that massive, murderous air attacks on the civilian population could shake the democratic legitimacy of a government. During World War II, the Germans applied this theory against cities in Great Britain, as did the British against German cities—although the two events failed to prove the theory because neither produced the intended destabilizing effect.

Consequently, we could deem the action against the civilian population perhaps the least pertinent of the 9/11 scenarios; however, this case does not reflect a classic air attack but a terrorist assault by aerial means. With the train bombings of March 2004 in Madrid, Spain, we saw how terrorism can have a destabilizing effect on a nation's democratic life if it occurs during an electoral period. An attack on the scale of 9/11 during such a time could directly affect democracy and, therefore, a nation's policy.

The choice of the three other targets clearly relates to the doctrine of strategic paralysis and systems analysis of an enemy. A larger-scale, successful strategic attack on a nation's economic structure as well as military and political leadership can deeply transform the nature of a conflict. The terrorists' clear intent to decapitate the United States politically, militarily, and economically heralded a new era in

terrorism. Previously, terrorist attacks could be characterized as either publicity stunts for the benefit of the news media or very limited intimidation operations. The events of 9/11, though, featured acts of war with strategic aims, and those in Madrid only confirm this new kind of terrorist action.

The Limits

Despite its tactical success and the shock it induced in world opinion, the 9/11 attack yielded only very limited long-term results. Although often compared in its suddenness and death toll to the Japanese attack on Pearl Harbor in 1941, 9/11 differed in some major ways. Out of the 300 aircraft that hit Pearl Harbor, the Japanese lost only 29, which means that the main tool of the attack emerged nearly unscathed and could, eventually, renew the assault or conduct another relatively soon afterwards. From a human point of view, the Japanese naval airmen returned to their carriers fortified with new experience, ready to fight again in other battles and thus sustain the long-term war effort. Only the absence of strategic vision on the part of the Japanese military leaders prevented them from better exploiting their initial success.

Conversely, the 9/11 terrorists chose a course of action that definitively precluded any renewal of the attack. Their conquest of freedom of action in American airspace was as brief as it was sudden, and the aircraft selected for the attacks were destroyed. Furthermore, the attack systematically killed the hijackers, who obviously could no longer profit from their training, experience, and motivation. Al-Qaeda thus lost the time invested in their recruiting, training, and infiltration. The terrorist organization's leaders therefore had to forgo the services of these highly qualified personnel and begin the recruiting and training cycle anew.

A military operation, whether for information collection or combat, undeniably gains quality and usefulness if it survives intact as a unit and participates in a coherent series of diverse operations that can perpetuate its suc-

cess. Therefore, after Pearl Harbor, the Japanese could envision a landing on the Hawaiian Islands or any other exploitation of their tactical success that would certainly have made the Pacific war much more difficult for the United States. The tactical success of a suicide terrorist attack carries within itself the seeds of strategic defeat because the motivation, training, specialized intelligence, and courage of the terrorist are lost, along with the surprise effect of his attack. Loss of motivation and training is compounded by the absence of experience brought back and shared with the organization, which harms the terrorists' cause over the long term.

Target selection for 9/11 may have seemed impressive since the terrorists eschewed subway stations or parking lots in favor of elements essential to the functioning of their adversary; however, target selection actually reflected a certain naïveté because all the targets were only links in a global system, and their destruction would not have brought down the whole system. The US defense establishment is not entirely centralized inside the Pentagon, and other command centers could no doubt have maintained the continuity of American defense. Likewise, a successful attack on the White House or Capitol would not have brought down the government because constitutional procedures fill the gap left by a deceased president or members of Congress. Finally, destruction of the World Trade Center would not cause the infinitely complex US and world economic structures to collapse. However, we must not overlook the negative effect of these attacks on the world economy or even on the US economy. In terms of economics, air transportation clearly suffered the most from these attacks.

Understanding the Emergence of Asymmetric Threats in Air Warfare

The events of 9/11 therefore mark the emergence in air-warfare strategy of a form of asymmetrical confrontation that allows elud-

ing and surprising conventional airpower. Asymmetrical confrontation is a relatively new notion in military strategy. The traditional military forces of the great powers attained very high levels of competence as a consequence of successive conflicts in the nineteenth century, the two world wars, and the indirect confrontations of the Cold War. This military strength obliged weaker nations or organizations to avoid direct, traditional confrontations that would quickly sweep them away. Terrorism against civilians and gaps in military capabilities, guerilla warfare, black markets, and illegal trafficking therefore represent modes of action that evade traditional military power that has proven too ponderous to respond adequately. The principle of proportional response to attacks, contained in the rules of legitimate defense, also forbids disproportionate military reactions. Moreover, the perpetrators of these asymmetric attacks are generally civilians hidden among the civilian population as well as the social and economic fabric of a society, a situation that demands perfectly targeted and measured military reactions to avoid disastrous collateral damage.

The wars of decolonization during the second half of the twentieth century show clearly the difficulty of countering these new modes of action, especially when they are associated with determined political action or, as in the Vietnam War, if they blend with conventional military actions. The Vietminh's ability to lead an exhausting and psychologically unsustainable guerilla war while knowing how to inflict classical military defeats at opportune moments contributed significantly to French and American defeats. Asymmetric conflicts become very dangerous when, guided by a strategic vision and a well-defined policy, they cause sustained destabilization through conventional and nonconventional courses of action. Therefore, asymmetric warfare poses a substantial challenge to conventional forces, who must adapt to these new hit-and-run warfare methods without giving up the full range of their conventional capabilities.

In aviation terms, asymmetrical threats are quite new. Hijacking and short-range attacks by surface-to-air missiles against civilian air-

craft offer only a glimpse of the potential ways paramilitary groups might affect aviation. Today, our reactions to these predictable or potential asymmetrical uses of aviation are at best vague and clumsy. The systematic barring of certain objects such as nail clippers or Swiss Army knives, while ordinary nylon string, pens, or credit cards might prove more dangerous, betrays a degree of feverishness among public authorities, who remain in a frightened defensive stance. Similarly, the restrictive security measures that France imposed on leisure and commuter airlines in the last few years might appear excessive, showing that it does not have a clear understanding of the threats. Civil, military, industrial, and leisure aviation authorities should make a serious effort to find a new asymmetric approach to air warfare and to counter possible threats from the air. National defense, according to the French Constitution of 1958, remains the concern of all citizens, and now more than ever, every aviator—whether professional or amateur—must embrace the role of air and territorial defense by aerial means.

Conclusion

These new modes of asymmetrical war have not rendered air warfare obsolete, but we must adapt and find new asymmetric courses of action that transcend traditional airpower thought. We no longer need sustained air superiority to conduct significant air wars, but losing control of the sky, even for a few minutes, can have terrible consequences. More than a question of techniques or means, we must augment known doctrines with a different approach to air warfare, and we must study that new approach and understand it as terrorism reaches a truly strategic level.

Because we obviously do not yet fully grasp these new facts, the Western powers remain in a defensive posture that is as uncomfortable for air passengers and airlines as it is for the authorities. However, we must react quickly and effectively by regaining not only the initiative but also an even more complete mastery of the skies, as well as the use of yet unknown means to maintain air superiority. □

The Air Force executes a global mission. Our approaches to operations, interoperability and training exemplify our global, international perspective.

—2007 U.S. Air Force Posture Statement

The Servicio de Vigilancia Aérea

Defending Costa Rican Sovereignty

MARIO E. OVERALL*

A VIDEO ON THE popular *YouTube* Web site shows a dramatic scene in which paramedics give first aid to the inhabitants of an unspecified region affected by floods and landslides. Below, very discreetly, a McDonnell Douglas MD-500 helicopter with its motor running waits for the sick who need transportation to a better-equipped aid station. Suddenly, the picture changes, showing us people in a Piper PA-31 lowering someone on a stretcher, complete with an intravenous bottle. Images follow one after another, accompanied by the classic Beatles song “Let it Be.” The same MD-500 flies over flooded areas; a versatile Cessna Soloy U206G transports sick children; refugees surround pilots in olive-drab flight suits, posing for a photo; and so forth. Finally, the wings and emblem of the Servicio de Vigilancia Aérea (Air Vigilance Service) (SVA) of the Costa Rican Ministry of Public Security appear just below the word *Thanks!*¹

This video represents perhaps the latest illustration of how the SVA tries to project its image as a part of the Fuerza Pública (Public Force), fully engaged in support during disaster situations and utterly dedicated to helping the population. Nevertheless, aside from this moving footage, a closer inspection permits the discerning eye to realize that the SVA’s functions go much farther—up to the point of crossing the thin line that separates a humanitarian entity from a formally established air arm.

One of the oldest democracies in the region, Costa Rica abolished its army on 1 December 1949 after undergoing a revolution that reformed the nation’s structure. Thereafter, internal security became the responsibility of

the Civil Guard, which, over the years, transformed itself into today’s Public Security Force, controlled by the Ministry of Public Security and composed of various services, including the Counterdrug Police, National Coast Guard, Public Force Reserve, and, obviously, the SVA, worthy successor to the former Costa Rican air force.

For its part (and according to constitutional mandate), the SVA’s mission involves supporting the other services of the Public Force in preserving internal order in the country, primarily through surveillance efforts and tactical/logistical transport, in addition to the public-relations outreach missions previously discussed. However, that mandate also delegates to the Public Force (hence to the SVA) the protection of national sovereignty, practically converting them into an army and air force, despite how much these institutions pride themselves on not being such things.

Military terminology and organizational structures do not exist in entities under the authority of the Public Force, and one can even find a department of human resources in their organizational charts, along with a lengthy list of directorates and secretariats in the best national-government style. Regardless, both the Public Force and SVA undeniably have the capacity, as well as the requisite equipment and training, to undertake military-style operations. In fact, in the late 1980s, the SVA managed to operate two armed Cessna O-2As in an efficient manner along the Nicaraguan border area in response to the conflict that counterrevolutionary guerrillas then waged against the Sandanista government of Nicaragua.

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The SVA's current aircraft inventory, stationed at Juan Santamaría International Airport and Tobías Bolaños International Airport, consists of two McDonnell Douglas MD-500E helicopters (tail numbers MSP012 and MSP018), three Cessna Soloy U206G light aircraft (tail numbers MSP004, MSP005, and MSP006), a Cessna T210N (tail number MSP009), a Cessna 210 (tail number MSP010), and two twin-engine Piper PA-31s (tail numbers MSP003 and MSP019). In addition, the service possesses a De Havilland C-7A (tail number MSP002) for tactical-transport missions, but a lack of spare parts has grounded that aircraft for several years. Incidentally, the SVA's only medium-transport helicopter, a Mil Mi-17 (tail number MSP016), was sold to the Colombian army in 2002.



An MD-500 of the SVA on a surveillance flight over the General Cañas Highway, San Jose, Costa Rica

As in the rest of Central America, the drug-trafficking problem is a matter of national concern for Costa Rica—hence for the Public Force and especially the SVA, both fully engaged in the antidrug struggle in coordination with the US government. The United States maintains a considerable number of surveillance aircraft based at Juan Santamaría International Airport near the capital and at the Liberia International Airport on the Atlantic coast of the country.

But it is precisely in these types of antidrug operations that the SVA has shown its sharp teeth. Since 2004 the service has maintained an airmobile quick-reaction team known as the “Seals,” consisting of police officers specially trained to perform operations to intercept and capture aircraft as well as boats involved in illegal activities, using primarily the SVA's two MD-500Es configured for assault transport. In this sense, the SVA works very closely with the Drug Enforcement Administration and Coast Guard—the local ones as well as those from the United States, which also maintains a detachment of surveillance boats in the country.

SVA aircraft also constantly conduct operations to seek and eradicate drug plantations, often in the Talamanca Mountains, where 179,000 marijuana plants were recently destroyed. During that operation, SVA aircraft not only provided armed cover to police forces conducting a search of the region on foot but also established an air bridge to facilitate the logistics of the operation.

Despite its very modest size, at least in Central American terms, the SVA has proven very efficient in fulfilling assigned tasks, especially those related to protecting Costa Rican sovereignty, despite the resource limitations endemic in the region's armed forces. In fact, the SVA relies almost entirely on aid provided by friendly governments such as Taiwan, France, and the United States. However, one commonly sees at least one SVA helicopter or light aircraft participating in any situation that involves the Costa Rican Public Force, be it an accident on the hectic General Cañas Highway or the capture of a large drug shipment along the Guanacaste coast. □

Note

1. “Vigilancia Aérea 2,” *YouTube*, 20 October 2006, <http://youtube.com/watch?v=FYsPKajGIsg> (accessed 20 April 2007).

Nash in Najaf

Game Theory and Its Applicability to the Iraqi Conflict

DR. HANK J. BRIGHTMAN*

YOU, THE IRAQI army and police forces, don't walk alongside the occupiers, because they are your arch-enemy."¹ This call for solidarity amongst indigenous security forces (ISF) and domestic insurgents (DI) by Shiite cleric and leader Muqtada al-Sadr in April 2007 is simply the latest evidence in support of this researcher's three years of applying game theory to the Iraqi conflict. Although other studies have examined Operation Iraqi Freedom from perspectives such as democratic nation building in an area of the world where such forms of government historically have not been the norm, this article represents the first known effort to apply the game-theory concepts of "Pareto improved" and "Pareto optimal" strategies (named after Italian economist Vilfredo Pareto) as well as "Nash" and "preferred" equilibriums (the former named after American mathematician John Nash) to the Iraqi conflict.

Specifically, this article examines how, through application of game theory to this model, US and coalition forces will ultimately suffer casualties at an increasing rate the longer they remain in Iraq. This will occur because both DIs and ISFs will turn away from attacking each other towards a point of mathematical corruption. At this theoretical point, American and coalition troops will become the target of broad-based DI attacks, with intelligence frequently provided by ISFs. For the purposes of this article, *ISF* refers to the Iraqi military as well as state and local police, and *DI* refers to the various domestic insurgent groups within Iraq.

In order to fully understand how two seemingly disparate entities—ISFs and DIs—will ultimately work together in an effort to improve both of their respective positions, one must examine the basics of game theory and the associated concepts of bargaining and equilibrium. In the following discussion, such terms as *player*, *improved*, *optimal*, *corruption*, *preferred*, and so forth, are used in their mathematical rather than their usual sense.

Flashback to Logic 101: The Prisoner's Dilemma

Developed by Merrill Flood and Melvin Dresher at the RAND Corporation in 1950, the "prisoner's dilemma"—an activity often played out in college logic, mathematics, and economics classes—demonstrates that if two players, suspect A and suspect B, act only in their own self-interest, both will suffer dire consequences.² For example, if each suspect is held in a separate interrogation room and told that by either confessing to the crime or "ratting out" his or her accomplice, each can receive a reduced sentence, then both suspects will either implicate the other or confess to the crime. This is commonly referred to as a zero-sum game because one prisoner's gain becomes the other's loss. If each condemns the other, then both will incur the maximum penalty. However, if both confess independently, each will incur some penalty—albeit likely a lesser one because they have shown they are willing to "cooperate" with the au-

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thorities. Lastly, if the two suspects work together and adopt the common strategy that would appear at first blush to benefit each one less (remaining silent), the benefit to both will actually increase—because the State, lacking a confession or statement of the other's guilt, will likely charge each with a lesser offense. The lesson learned from the prisoner's dilemma and similar scenarios is that players in competition with each other sometimes gain more by conspiring than by attempting to combat each other to the last.

Game Theory 101: A Primer

Mathematicians refer to scenarios such as the prisoner's dilemma as simple form games (SFG)—also referred to as normal form games—which commonly have two players, each of whom strives to receive the highest payoff at the end of a simultaneous move (i.e., by seeking what is referred to in economics as a Pareto optimal position). One determines payoffs—outcomes with real value to each player—through a process called quantification, conducted by primary stakeholders who have a direct, vested interest in the outcome of the game. In the Iraqi conflict, the two players within the SFG are the ISFs and DIs. The United States and coalition forces are not considered players in this game (explained later in this article).

Additionally, in extensive form games (EFG)—which feature two or more players engaged in multiple move-for-move exchanges—players generally worry less about intermediate payoffs than the ultimate payoff at the conclusion of the game. Obviously, quantification of the EFG is far more complex than in the SFG because one must consider both short-term and long-term payoff values. Moreover, as mathematicians John von Neumann and Oskar Morgenstern discovered, EFGs are frequently not zero-sum games (i.e., one player's loss does not always perfectly correlate with another player's gain, depending on the complexity of the rules); therefore, predicting the outcome based solely on the

payoffs proves difficult at best.³ Because EFGs are distinguished by multiple moves, players must possess an overall broad strategy (as they would in the SFG) as well as smaller substrategies to counter the other players' moves throughout the game.

In the EFG, as time progresses, the model becomes susceptible to influence from outside forces, termed "strange attractors." Because payoffs in the EFG are not as readily apparent and the rules are generally more complex than in the SFG, these strange attractors affect the players' willingness to adhere to previously stated rules and therefore decrease the overall stability of the game.

Achieving Equilibrium: "Can't We All Just Get Along?"

As time elapses, both SFGs and EFGs become less stable due to player frustration (and, in some cases, physical fatigue). Accordingly, each player will begin to reduce his or her expectations for the ultimate payoff. Consider the gambler who feeds quarters into a slot machine for an hour. This is essentially a two-player SFG (the gambler and the house), consisting of a single turn, with the focus on an immediate payoff. Ultimately, the gambler will likely walk away from the "one-armed bandit" down \$25 after 45 minutes without winning the jackpot—an especially likely outcome if the player is down to her last dollar (limited resources), has agreed to meet her sister-in-law in an hour to catch a Las Vegas show (time constraints), and is feeling pangs of hunger because she has not yet eaten lunch (player fatigue). Similarly, the professional poker player may be willing to cut his losses at five-card stud (an EFG because it involves multiple turns, players, payoffs, strategies, and substrategies) and accept a smaller pot rather than play through to the end and face a new dealer later in the game (a strange attractor) who clearly knows the fine art of dealing.

As players' expectations for the ultimate payoff start to fade with the passing of time (in the case of the EFG, with the destabilizing influence of strange attractors), each player be-

gins to think about how, by negotiating with the opponent, he or she might end the game without suffering additional losses. One refers to the point at which players start to work cooperatively towards agreement as bargaining towards equilibrium (or, in economics, Pareto improvement). When both players have reached a point at which they can achieve the highest aggregate payoff, the game ends in preferred equilibrium.

However, the influence of strange attractors in a model that will become increasingly unstable (bifurcated) over time often induces players to hasten their desire for a Pareto improved position instead of a superior (Pareto optimal) position—even though doing so may lessen their ultimate payoff because they did not play through to the end of the game. One refers to the point at which both players reach Pareto improvement, despite the fact that they may have received a greater payoff had they waited, as Nash equilibrium. First theorized by Princeton University professor John Nash, this equilibrium is sometimes described as an inchoate or interrupted equilibrium because the players reach a point of compromise prior to the conclusion of the game's ultimate payoff.⁴ Several Nash equilibriums may exist at various points prior to achieving preferred equilibrium. Most SFGs and EFGs do not start out with players seeking to work cooperatively (i.e., striving for Pareto improvement). However, as each player's "winner take all" strategy clearly becomes less viable with the passing of time, both players realize that the longer it takes to come to consensus and the more resources they expend in their individual quest for dominance, the smaller the ultimate payoff should they emerge victorious (an economic concept known as Rubinstein Bargaining).⁵ Ultimately, players strive to reach consensus if for no other reason than they wish to lessen their losses.

In applying Nash equilibrium to the prisoner's dilemma, one sees that this equilibrium point (both players confessing to the crime) will preempt the preferred equilibrium (both players remaining silent). This is especially true with the passing of time (prisoners do not like being left alone in interrogation rooms)

and, in the case of an EFG, if strange attractors are introduced into the model (e.g., so-called eyewitnesses, purported new evidence, etc.). Thus, the passing of time and the influence of strange attractors preempt achieving the preferred equilibrium and instead yield the inchoate or Nash equilibrium. The presence of US and coalition forces in Iraq, especially over time, may actually hasten a Nash response between ISFs and DIs.

Corruption between Players: The Simple Form Game and the Iraqi Conflict

Equipped with a working knowledge of SFGs, EFGs, Pareto improvement, Pareto optimal, and Nash and preferred equilibriums, one can not only examine each player's prospective payoffs but also predict the point at which both the inchoate (Nash) and preferred equilibriums will occur in the Iraqi conflict. In order to identify these points, the remainder of this article assumes a two-player game, namely with ISFs and DIs. Admittedly, attempting to contain the myriad of security entities under the ISF umbrella will likely prove as much of a generalization as placing the many native terrorist organizations that exist in Iraq within the DI grouping. The many law-enforcement and military organizations that comprise the ISF category, along with numerous hegemonic entities that make up the DI set, represent a variety of heterogeneous cultures, values, beliefs, and often competing interests.

Figure 1 provides a summary of payoffs quantified for both players in the simple-form, zero-sum game for the Iraqi conflict as well as each player's Pareto optimal strategy (point value equals four). It also identifies the respective quadrants in which the Nash and preferred equilibriums will occur.

In figure 1's SFG, the payoffs for both players are based on varying degrees of remaining active or passive. Each player hopes that the other will not move (i.e., will remain passive), thus achieving a Pareto optimal position for himself or herself. However, if this one-move

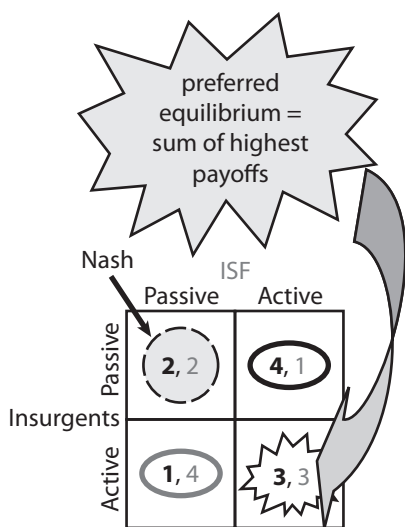


Figure 1. Iraqi conflict as a simple form game

SFG is repeated over and over again, it becomes clear to both players that neither is willing to remain passive. Over time, as player frustration increases, resources begin to dwindle, and fatigue sets in, the players will begin bargaining towards equilibrium (i.e., seeking Pareto improvement as opposed to Pareto optimal).

As illustrated, one would attain the preferred equilibrium in this SFG at the “3, 3” quadrant because the highest aggregate payoff occurs at this point in the game. One must remember that preferred equilibrium has no connection to the player’s Pareto optimal strategy; rather, it is simply a mathematical expression for the point at which one can derive the greatest quantified payoff value.

As both players continue bargaining, the game moves from a competitive to a cooperative mode, leading to increased communication, which in turn yields further bargaining between players. Inflexible rules and intransigent positions become more elastic, and the players proffer side payments to hasten agreement. At this point, the game is said to have become mathematically corrupted because the players are no longer following the rules established prior to initial play. They have also moved from focusing on Pareto optimal posi-

tions to Pareto improved positions. Therefore, the inchoate or Nash equilibrium will inevitably occur at the “2, 2” quadrant.

When one applies these concepts to the SFG for the Iraqi conflict, the challenges faced by US and coalition forces in Iraq become readily apparent. Ultimately, the model will become mathematically corrupted. Both players will move from seeking Pareto optimal to Pareto improved positions (i.e., ISFs and DIs will lessen their expectations, hastening equilibrium). Moreover, for reasons already discussed, Nash equilibrium will preempt the two players from attaining the preferred equilibrium (the quadrant in which equilibrium at the highest aggregate payoff value in the model will occur) wherein DIs continue to carry out attacks with improvised explosive devices throughout Iraq, and ISFs continue to arrest or kill terrorists.

It is important to understand that one can think of all equilibriums (Nash and preferred) as solutions. One can use software such as the publicly available Gambit application (originally developed by Theodore Turocy and Andrew McLennan in 1994 and now in its 11th release) to test the probability and frequency of these solutions occurring within the parameters of the model.⁶ Repeated test runs of the zero-sum Iraqi conflict SFG yield the same result: a Nash response in which ISFs and DIs are willing to “sacrifice” US and allied forces to achieve Pareto improvement is inevitable. Evidence already exists to suggest that bargaining between players has begun, such as Prime Minister Nouri al-Maliki’s proposed National Reconciliation Plan, which would afford partial amnesty to some DIs.⁷

US Interests in Iraq: The Extensive Form Game

Mathematically speaking, neither the United States nor its coalition forces can be considered players in the Iraqi conflict SFG because the United States cannot quantify payoffs. This also holds true in the EFG because America’s citizenry does not have a direct, primary-stakeholder interest in the conflict (i.e., they

are not part of the quantification process). Only the Iraqi people—represented in this game by the two primary players (ISFs and DIs)—are fundamentally and intimately affected by the payoffs at each turn within the EFG, as well as by the ultimate payoff at the conclusion of the game.

Indeed, from a game-theory perspective, one finds very few conflicts in American history wherein US forces have had the ability to participate in the quantification process as a primary player, save for the colonists in the American Revolutionary War, Union and Confederate forces in the Civil War, and servicemen in the US intervention during World War II after the Japanese attack at Pearl Harbor. No one should ever dismiss the brave and noble actions of US forces in other conflicts, but from an EFG perspective, one can mathematically consider the United States a player only when America directly involves itself in the quantification of payoffs. For a party to assume this role, its stakeholder interest must have value equal to that of the other players. This is not to suggest that US and coalition forces do not affect the model or its two players (ISFs and DIs) in the Iraqi conflict EFG. Indeed, those forces function as strange attractors.

For the purposes of the current situation in Iraq, US and coalition forces, multinational business interests, third-party foreign-terrorist organizations, and other interested parties would all be considered strange attractors whose predominant role involves hastening the model towards equilibrium. As time progresses and the model continues to bifurcate, the EFG becomes inherently less stable; thus, strange attractors play a greater role in moving the players towards cooperative bargaining (Pareto improvement). As was the case in the SFG presented earlier, the EFG becomes corrupt. Players begin working in cooperation (bargaining towards equilibrium) rather than competing for a Pareto optimal position.

In the Iraqi conflict, bargaining towards equilibrium entails emergent conspiracies between the two players—ISFs and DIs—as the game becomes less stable. Police officers begin tipping off insurgents as to where raids will take place in exchange for protection from fu-

ture attacks, and terrorists provide bribes to Iraqi soldiers in exchange for overlooking caches of household weapons. The revelation that the late terrorist leader Abu Musab al-Zarqawi's cell phone contained telephone numbers for some of Iraq's senior Interior Ministry officials and lawmakers provides further evidence that Pareto improvement may have already commenced between ISFs and DIs.⁸ In March 2006, Sgt Paul E. Cortez, Pfc Jesse Spielman, SPC James Barker, and Pvt Stephen D. Green raped and murdered 14-year-old Abeer Qassim al-Janabi and then killed her family.⁹ Subsequently, in September 2006, insurgents killed three US soldiers simply because they served in the same unit as the four former soldiers who carried out this heinous crime. Iraqi Interior Ministry officials refused to condemn the killing of the US soldiers, which Iraqis widely regarded as an "honor killing."¹⁰ The insurgents' ability to capture and kill US service members suggests a level of access to operational-security plans for US forces previously unavailable to terrorist entities.¹¹

Using the Gambit software application, we can model the EFG for the Iraqi conflict from the perspective of DIs: player one in the dominant strategy position (i.e., DIs make the first move). The results (fig. 2) appear similar to those for the SFG (fig. 1).

Conclusions: Where Do We Go from Here?

As both the SFG and EFG models show when applied to the Iraqi conflict, both players (ISFs and DIs) will ultimately abandon their Pareto optimal strategies and instead begin bargaining towards equilibrium. When this happens, the model will become corrupted, and a Nash solution will preempt the preferred equilibrium. In the EFG, the presence of strange attractors such as US and coalition forces, foreign-terrorist entities, and other third-party interests may serve only to hasten this process in an increasingly bifurcating model. Release of *The Iraq Study Group Report* of December 2006, which specifically cites that

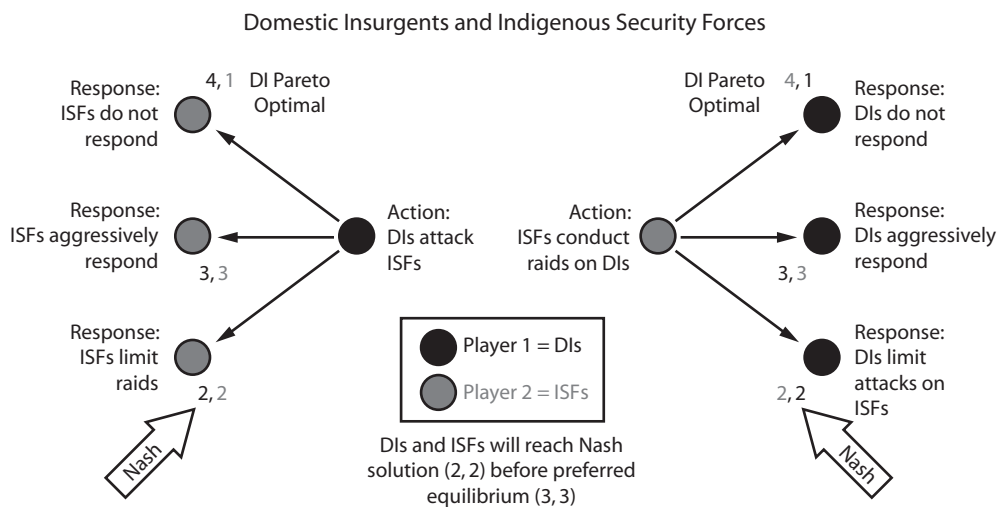


Figure 2. Iraqi conflict as an extensive form game

“violence is increasing in scope and lethality,” coupled with increasingly nonlinear attacks against US and coalition forces (e.g., improvised chlorine chemical attacks, use of women as suicide bombers, etc.) suggests that the model explored in this article continues to destabilize.¹² Moreover, additional conflicts between Israeli forces and the Lebanese Hezbollah Party may introduce additional strange attractors into the model, further hastening the “2, 2” Nash payoff even more quickly than initially predicted using the Gambit software application.

It is possible for the United States to assume a player role in Iraq rather than serve as a strange attractor. However, to do so, stakes for Americans would need to equal those of the Iraqi people in order for the quantification process to occur. The United States would have to commit hundreds of thousands—if not millions—of military and civilian personnel to Iraq for decades, which it could accomplish in the short term only by fully mobilizing all reserve-component forces and initiating a military draft to meet future needs. US and Iraqi culture and values would need to become inextricably linked. Each American would have to feel a stakeholder interest in Iraq, evidenced through personal sacrifice in

the form of military or civilian service in support of Iraqi Freedom or the rationing of US goods to support the Iraqi people (comparable to rationing during World War II). Only then could America effectively participate in the quantification process. It is highly unlikely that present-day Americans or their elected representatives would be willing to commit to personal sacrifices, such as a military draft, war taxes, or the rationing of food and supplies. Accordingly, it is not mathematically possible for America to achieve player status in Iraq.

One must note that US policy decisions take into account elements beyond the theoretical constructs of the SFG or EFG. Even if America cannot obtain player status, excellent reasons may exist for the United States and coalition forces to remain in Iraq, such as nation-building and humanitarian purposes.

However, American policy makers and the public must be prepared to accept the fact that if US forces remain in Iraq, the soldiers, sailors, airmen, and marines bravely serving there will remain a strange attractor in a mathematical model that is destabilizing over time. Within this game, DIs and ISFs will eventually arrive at Nash equilibrium. \square

Notes

1. Associated Press, "Radical Cleric Calls on Iraqis to Halt Cooperation with U.S. Military," *FOXNews.com*, 8 April 2007, <http://www.foxnews.com/story/0,2933,264814,00.html> (accessed 10 April 2007).
2. Following World War II, private and quasi-governmental think tanks such as the RAND Corporation were established as a means to further research in areas such as war gaming and hostile-action contingency planning. Flood and Dresher were among the first of this new breed of mathematicians focusing on multiplayer simulations. Douglas Hofstadter expanded upon and clarified much of their original research in this area. See Douglas R. Hofstadter, *Metamagical Themas: Questing for the Essence of Mind and Pattern* (New York: Basic Books, 1985).
3. In 1944 Princeton University professors John von Neumann and Oskar Morgenstern authored their landmark economic paper "Expected Utility Theory," which focused exclusively on the application of strategic game theory to social problems. Their technique was subsequently used to examine virtually every social-organizational problem imaginable, from settling antitrust disputes to the US-USSR arms race during the Cold War. "The von Neumann-Morgenstern Expected Utility Theory," *The History of Economic Thought*, Bernard Schwartz Center for Economic Policy Analysis, <http://cepa.newschool.edu/het/essays/uncert/vnmaxioms.htm> (accessed 10 April 2007).
4. See Carlo C. Jaeger et al., "Decision Analysis and Rational Action," working papers, chap. 3, http://www.pik-potsdam.de/~cjaeger/working_papers/v3chap03.pdf (accessed 10 April 2007).
5. Ariel Rubinstein's theory of 1982 states that in an alternating bargaining game in which one player makes an offer followed by the other, the ultimate value of the payoff will decrease the longer the game is played. Ultimately, the players will be willing to settle for a lesser payoff simply to end the game. See Lucy White, "Prudence in Bargaining: The Effect of Uncertainty on Bargaining Outcomes," Harvard Business School, 9 December 2003, <http://www.people.hbs.edu/lwhite/pdf/newfiles/prudence%20in%20bargaining.pdf> (accessed 10 April 2007).
6. The *Gambit Software Application for Game Theory* has been used extensively in mathematical modeling and simulation since its inception in 1994. The current version of the software, developed by Richard McKelvey, Andrew McLennan, and Theodore Turocy, allows the user to explore player strategies, contingencies, and outcomes for Nash equilibrium as well as for several other game-theory models. The current version of the Gambit software application is available free of charge at "Software Tools for Game Theory," *Gambit*, <http://econweb.tamu.edu/gambit/support.html> (accessed 10 April 2007).
7. Prime Minister Nouri al-Maliki unveiled the National Reconciliation Plan on 6 June 2006 for the purpose of relieving tension between various religious and ethnic elements vying for power in Parliament. Under the terms of this plan, approximately 2,500 Iraqi detainees held in US and allied custody would be released without prejudice or further governmental action. Jaime Jansen, "Iraq Government to Release 2,500 Detainees in Reconciliation Bid," *Jurist: Legal News and Research*, <http://jurist.law.pitt.edu/paperchase/2006/06/iraq-government-to-release-2500.php> (accessed 10 April 2007).
8. Killed in a targeted bombing north of Baghdad by US and coalition forces on 8 June 2006, Abu Musab al-Zarqawi was considered the leading figure behind many of the bombings and kidnappings in Iraq, from the 2003 invasion up until his death. Al-Zarqawi was credited with implementing a complex terror-cell structure comparable to al-Qaeda's other operations around the world. Ellen Knickmeyer and Jonathan Finer, "Insurgent Leader Al-Zarqawi Killed in Iraq," *washingtonpost.com*, 8 June 2006, <http://www.washingtonpost.com/wp-dyn/content/article/2006/06/08/AR2006060800114.html> (accessed 10 April 2007).
9. In February 2007, Sergeant Cortez accepted a plea bargain and will be eligible for parole in 10 years. Specialist Barker was sentenced to 90 years in a military prison, and Private Green was dishonorably discharged. "U.S. Soldier Sentenced to 100 Years for Iraq Rape, Killing," *Al-jazeera.com*, 23 February 2007, http://www.aljazeera.com/me.asp?service_ID=13000 (accessed 10 April 2007).
10. See Associated Press, "Group: Soldiers Killed over Rape-Slaying," *USA Today*, 11 July 2006, http://www.usatoday.com/news/world/iraq/2006-07-10-group-claim_x.htm (accessed 10 April 2007).
11. DI access to the operations data of US and coalition forces appears to be growing in Iraq. In addition to knowing the details with respect to where and when US forces would be located on the day this ambush took place, *The Iraq Study Group Report* notes that the alliance between insurgent groups and government officials in some cases has compromised operational security. James A. Baker III et al., *The Iraq Study Group Report* (New York: Vintage Books, 2006), 5, http://permanent.access.gpo.gov/lps76748/iraq_study_group_report.pdf (accessed 10 April 2007). Lastly an attack in Karbala on 22 January 2007, which left 27 people dead, including two marines, went undetected because the terrorists had US and Iraqi military uniforms and passes. Damien Cave, "Troops Killed by 'Insurgents' Wearing US Army Uniforms," *Infowars.com*, 22 January 2007, http://www.infowars.com/articles/iraq/troops_killed_by_insurgents_wearing_us_army_uniforms.htm (accessed 10 April 2007).
12. Baker et al., *Iraq Study Group Report*, xiii.



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Predator Command and Control

An Italian Perspective

COL LUDOVICO CHIANESE, ITALIAN AIR FORCE

Editorial Abstract: The author, an Italian Air Force officer, compares operations with Italian Predator unmanned aerial vehicles (UAV) in Iraq with past and present US Predator doctrine and operations. After a brief overview of the significance of doctrine and command and control, Colonel Chianese analyzes problems he encountered during operations and recommends ways to improve strategic vision and policy for Italian UAV operations.



Victory smiles upon those who anticipate the changes in the character of war, not upon those who wait to adapt themselves after the changes occur.

—Giulio Douhet

DURING OPERATION IRAQI Freedom, the Italian Air Force flew its new Predator fleet in support of combat operations. The Predator, an American-made, medium-altitude unmanned aerial vehicle (UAV) used for surveillance and reconnaissance, has a range of up to 400 nautical miles and can fly at altitudes up to 25,000 feet. Cruising at a speed of 70 knots, it can loiter for hours over targets.¹ Even though Italian Predator operations generally have been considered successful, some issues still need solving in order to maximize efficiency and effectiveness. Changes in the character of air warfare are occurring now, and the Italian Air Force must adapt to them. During that service's Predator operations in Iraq, most problems originated in the command and control (C2) structure, reflecting a lack of strategic doctrine, an incomplete application of basic doctrinal principles, and an inadequate level of operational command.

In this article, the author compares his knowledge of the Italian Predator operation—derived from his experience as the Italian air component commander from December 2005 to April 2006 in Tallil, Iraq—with doctrine as well as past and present US Predator operations. After a brief overview of the significance of doctrine and C2, the article then introduces Italy's Operation Antica Babilonia (Operation "Ancient Babylon") and describes the C2 structure for the Italian Predator, pointing out the main problems encountered during operations and proposing some final recommendations to stimulate, develop, and integrate a strategic vision and policy for Italian UAVs in future expeditionary and national missions.

The Significance of Doctrine

The word *doctrine* has different connotations. For many people, it recalls lofty and arcane discussion by theorists and academicians that offers little to average military personnel trying to operate down at the unit level. The US Air Force points this out very well in its basic doctrine manual, warning us against settling for the rules of thumb so often used in

operations.² Instead, we must capture the accumulated body of knowledge, consciously and formally incorporating it into doctrine, which consists of fundamental principles by which militaries shape their actions in support of national objectives and, on operational and tactical levels, in support of the commander's intent.³ Ideally, all major operations are based on a campaign plan that reflects doctrinal principles and tenets derived from the "accumulated body of knowledge" mentioned above.

But in some instances, the Italian Air Force has not followed these almost obvious recommendations, performing some military operations with neither a precise doctrinal strategy in mind nor a strategic directive—or simply without completely applying appropriate basic principles and tenets of doctrine. By way of accounting for this situation, historian Frank Futrell suggests that airmen, not known as prolific writers, have "developed an oral rather than a written tradition."⁴ Additionally, some leaders believe that "adherence to dogmas has destroyed more armies and cost more battles than anything in war."⁵ In fact, bad doctrine overly bounds and restricts creativity, and if "not properly developed, and especially if parochialism is allowed to creep in, doctrine will point to suboptimal solutions."⁶ In the case of Italian Predator operations in Iraq, no strategic doctrine existed for UAVs in general or for Predators in particular. Although the first two reasons may have played some role, the main reason for not having such guidance was the lack of previous experience with this specific asset and insufficient time to develop sound, timely doctrine.

Even if UAVs are no longer considered a technical innovation in the United States, where research and development related to these aircraft are significantly advanced, they represent a significant leap forward for the Italian Air Force. But an air force needs more than advanced technology to provide effective capability. After purchasing Predator technology "off the shelf," Italy's air service rapidly fielded it in Iraq before developing a strategy or doctrine for employment. Predictably, its Predator force suffered the consequences, learned

many valuable lessons, and should profit from this experience.

Command and Control of Airpower: Doctrinal Basics

In the realm of doctrine, C2 has always been considered an important issue for military organizations and leaders. A vital and integral part of war fighting, it requires careful planning and execution in order to be effective. In the beginning of Italian aviation history, the famous air theorist Giulio Douhet wrote that “the war in the air is the true war of movement, in which swift intuition, swifter decision, and still swifter execution are needed. It is the kind of warfare in which the outcome will largely be dependent upon the commander.”⁷ Indeed, Italians in Iraq learned what Americans had experienced in Serbia, just seven years before, as noted in the *Air War over Serbia Report*:

In the air war over Serbia, command and control worked well at the tactical level. For example, the rapid re-targeting of attack aircraft against targets detected by the Predator unmanned aerial vehicle was innovative and quite successful. At the operational and strategic levels, however, Air Force leaders repeatedly noted two dominant problems. The first was that command and control structures and coordination procedures were overlapping and confusing. The principle of unity of command must be reinforced in future training, doctrine, and operations.⁸

The Italian Air Force experienced surprisingly similar problems in Iraq. That service could have better exploited American lessons learned with Predators to compensate for its lack of experience with this asset, especially in the C2 architecture, since US forces have operated UAVs in general and Predators in particular since 1995.⁹

At an even higher level, each military leader should be able to apply C2 principles and tenets universally since they are considered common knowledge. Unity of command, for example, “ensures concentration of effort for

every objective under one responsible commander.”¹⁰ Simplicity calls for “avoiding unnecessary complexity in organizing, preparing, planning, and conducting military operations.”¹¹ One must also prioritize air and space power, thus assuring that demand for air and space forces will not overwhelm air commanders in future conflicts.¹² But these abstract principles require an operational capability to put them into practice. Gen Ronald R. Fogleman, former US Air Force chief of staff, once said that “a commander without the proper C2 assets commands nothing except a desk.”¹³ Effective C2 becomes possible only by dedicating significant resources for equipping, training, and exercising C2 operators; thus, US Air Force doctrine directs commanders to “ensure their people are fully proficient at using designated C2 systems when performing wartime duties.”¹⁴

Antica Babilonia: Italy's Debut in UAV Operations

Italy's involvement with the multinational forces in Iraq began on 15 April 2003 when Franco Frattini, minister for foreign affairs, addressed Parliament on the government's intent to support the military coalition in Iraq. About a month later, Defense Minister Antonio Martino instructed the military to plan the deployment of a national contingent to enforce United Nations Security Council Resolution 1483. The resulting military operation, known as Antica Babilonia, began on 15 July 2003, consisting of an Italian joint task force formed around an army infantry brigade.¹⁵

At that time, Iraqi Freedom had just “ended major combat” and had started security, stability transition, and reconstruction operations.¹⁶ Combined Joint Task Force 7 in Baghdad included two US-led multinational divisions in north and northwest Iraq, a Polish-led multinational division in south-central Iraq, and a British-led multinational division in southeast Iraq. By 15 May 2004, coalition forces had organized into two commands, Multi-National Force-Iraq as the operational command, and Multi-National Corps-Iraq as the tactical com-

mand, with Italy's participation described by a national operational directive.¹⁷ For Antica Babilonia, three Italian general officers assumed key positions in the Baghdad headquarters.¹⁸ A sector within the British multinational division was assigned as an area of responsibility (AOR) to the Italian joint task force, commanded by a fourth Italian general.¹⁹

Unfortunately, the end of major combat did not mean that peace had returned to Iraq. The Italian 3,000-soldier contingent, based in An-Nasirya, the capital of Dhi Qar province, faced violent conflict between US-led coalition forces and insurgents.²⁰ For the most part, Antica Babilonia focused on stabilization operations, security-sector reforms, training, and nation-building measures.²¹ Deployed forces and assets underwent adjustments according to the changing threat. Land forces were augmented by a joint air task group of two helicopter squadrons and, since January 2005, by a UAV squadron equipped with RQ-1 Predators for surveillance and reconnaissance missions.²²

Predator Command and Control Architecture: A Complicated Puzzle

The following observation, found in a US joint publication on multinational operations, certainly applied to Antica Babilonia: "No single command structure meets the needs of every multinational command but one absolute remains constant; political considerations will heavily influence the ultimate shape of the command structure."²³ Italy, however, did not always keep in mind the principle of simplicity when it established the Predator C2 system. In fact, it opted for a model that allowed for coalition employment of its forces but also ensured national control, particularly for key assets (fig. 1). Drawing on its experience with the North Atlantic Treaty Organization (NATO), Italy used the latter's doctrine to define its command relationships. For example, the Italian *Capo di Stato Maggiore della Difesa* (defense chief of staff) always wields operational command (OPCOM), the highest level of com-

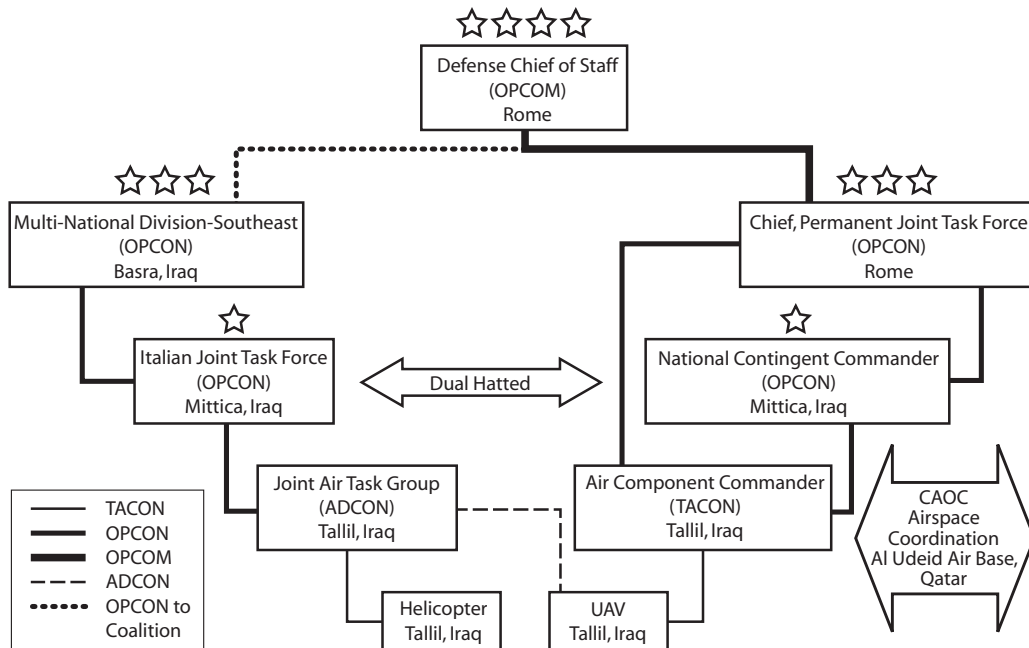


Figure 1. UAV and helicopter command and control in Antica Babilonia. (Adapted from *Direttiva Operativa Nazionale COI-O-153-R* [Roma: Comando Operativo di Vertice Interforze, April 2005].)

mand in the military hierarchy, comparable to combatant command in the US military. His functions are similar to those of the US chairman of the Joint Chiefs of Staff, although the Italian officer has command authority over the service chiefs. The defense chief of staff in Rome retained OPCOM of the Italian forces deployed to Iraq. The following command relationships applied:

- tactical control (TACON): “the detailed and, usually, local direction and control of movements or manoeuvres necessary to accomplish missions or tasks assigned.”²⁴
- operational control (OPCON): “authority delegated to a commander to direct forces assigned so that the commander may accomplish specific missions or tasks which are usually limited by function, time, or location; to deploy units concerned, and to retain or assign tactical control of those units. It does not include authority to assign separate employment of components of the units concerned. Neither does it, of itself, include administrative or logistic control.”²⁵
- OPCOM: “authority granted a commander to assign missions or tasks to subordinate commanders, to deploy units, to reassign forces, and to retain or delegate operational and/or tactical control as he or she deems necessary. . . . It does not include responsibility for administration.”²⁶
- administrative control (ADCON): “direction or exercise of authority over subordinate or other organizations in respect to administration and support, including organization of service forces, control of resources and equipment, personnel management, unit logistics, individual and unit training, readiness, mobilization, demobilization, discipline and other matters not included in the operational missions of the subordinate or other organizations.”²⁷

OPCON of most Italian forces, however, was transferred to the British commander of Multi-National Division-Southeast in Basra. The Predators represented a significant ex-

ception to this command relationship in that the *Comandante del Comando Operativo di Vertice Interforze* (COI) or chief of the permanent joint task force retained OPCON of those UAVs as a national-only asset, made available to the coalition on an excess-availability basis. The COI and his staff plan, prepare, and direct joint military operations and exercises for the defense chief of staff. The COI does not deploy from his location in Rome but can deploy a theater joint task force with OPCON of assigned assets.²⁸

In Antica Babilonia, the chief of the permanent joint task force retained Predator OPCON, unlike that of helicopters, for all missions within the AOR, exercised through the national contingent commander, who also commanded the Italian joint task force on the coalition side and represented unity of command of the Italian contingent through a dual-hatted arrangement. Even though the same person holds these positions (national contingent commander and commander of the Italian joint task force), the remainder of this article uses the terms separately to indicate the chain of command (national only for national contingent commander, coalition for Italian joint task force) under discussion.

On the other hand, missions requested by other Italian national agencies and the coalition, if not in direct support of the Italian contingent, required case-by-case direct approval from the chief of the permanent joint task force, who exercised OPCON directly over Predator operations. The air component commander, head of an air-forward command element acting both as tasking authority for the Predator squadron and coordinating agency with Iraqi Freedom’s combined air operations center (CAOC) in Al Udeid, Qatar, exercised TACON of the UAVs.²⁹ Although helicopters and UAVs were part of the same joint air task group of the Italian joint task force, the former fell under TACON of the joint air task group commander but the latter under TACON of the air component commander.³⁰ The commander of the joint air task group also exercised ADCON over the UAV personnel.

In summary, the Italian defense chief of staff assigned the mission and tasks (under his

OPCOM authority) to a different subordinate commander—the COI commander or chief of the permanent joint task force—in order to deploy a joint task force in Iraq. The chief of the permanent joint task force then delegated OPCON to the joint task force commander, except for Predators. Figure 1 shows the dual-hatted relationship of the Italian joint task force on the left of the diagram (representing the coalition chain of command) and the national contingent commander on the right of the diagram (representing the Italian chain of command). US Air Force doctrine calls for caution when “multihatting” commanders because doing so could distract them from focusing on the right level of war at the right time. On the other hand, not multihatting a commander may degrade unity of effort, which, as we will see later, occurred in the case of Italian Predator activities at the tactical level.

Unity of Command and Unity of Effort

Unity of command is a principle of war.³¹ As stated before, such concepts are not always taken into consideration, as was the case with Italian Predators in Iraq. Figure 1 shows that the Predator squadron had two separate lines of authority: a relationship with the commander of the joint air task group (ADCON) and one with the air component commander (TACON). Despite having a single commander at the operational level—the national contingent commander / commander of the Italian joint task force—in practice, this double relationship meant that two different tactical commanders existed for the same UAV squadron. This apparently minor issue turned out to be one of the main sources of C2 problems.

Presumably, the original rationale behind this structure entailed having a single commander for all air assets (commander of the joint air task group). But when Predators were “plugged in” to what was a joint helicopter squadron in 2005, headquarters in Rome required a national-only line of command and introduced the air component commander.³² While the air component commander exercised TACON over the Predators, the joint air task group commander had responsibility for

their administration and support. This arrangement often caused friction.

In 2005 official quarterly reports from Italian air component commanders to their superior command in Italy showed continuous evidence of confusion, rivalry, and overlapping authority between officers appointed as air component commanders and joint air task group commanders.³³ Personnel assigned to the UAV squadron frequently referred their problems either to the air component commander or the joint air task group commander, without really understanding who was responsible for what. The national operational directive lacked sufficient detail to distinguish between the authority of the joint air task group commander and air component commander. According to that directive, the joint air task group commander was responsible for providing all daily support to personnel and for filing efficiency reports for every single Italian aviator deployed in Tallil, Iraq, except the air component commander. He commanded a full staff, which enabled robust support in ensuring the execution of his decisions.

On the other hand, although the air component commander had only one officer and one warrant officer directly supporting him, he exercised full authority over Predator missions and tactical command over personnel involved in them, from planning through execution. The authority of the air component commander, typically functional in nature, was often misinterpreted by some operators and sometimes by the two commanders themselves, especially in overlapping activities involving both supporting and operational tasks such as management of the intelligence-exploitation cell, distribution of imagery-intelligence products, and management of technical personnel. This slowed decision-making processes, and personnel appeared generally confused and sometimes even reluctant to speak up about problems. For example, in May 2006, when an Italian UAV crashed due to a malfunction, there was no specific, detailed plan for its emergency recovery.³⁴ Although analysts had predicted the problem in previous months and despite intensive effort to lay down plans and procedures, lack of a decision about who

had approval authority prevented agreement on a final plan.³⁵

Because of the location of the joint air task group commander and air component commander under separate chains of command, unity of effort required a strong working relationship and a shared sense of mission. The two commanders eventually committed to daily meetings in Tallil to solve issues related to UAV C2, but one should not consider this a permanent fix. Competition for resources, lack of understanding of aircraft capabilities, and competing mission priorities could destroy even the most cordial arrangement.

One must not leave the effective C2 of precious air assets to chance. Air Force Doctrine Document (AFDD) 1, *Air Force Basic Doctrine*, tells us that “unity of command ensures concentration of effort for every objective under one responsible commander. This principle emphasizes that all efforts should be directed and coordinated toward a common objective.”³⁶ AFDD 1 also calls for centralized control and decentralized execution to assure concentrated effort.³⁷ During World War II, the Allies learned from their mistakes and adapted their doctrine accordingly:

As Supreme Allied Commander in Europe, General Eisenhower invoked new doctrine by insisting upon a single air commander reporting directly to him. The Allied campaign in North Africa during World War II began with air power parceled out to various commanders. . . . The limitations of this arrangement quickly became apparent, particularly during the battle at Kasserine Pass. During the 1943 Casablanca Conference, Roosevelt and Churchill approved a new command structure that centralized control under an airman. This new concept quickly found its way into Army doctrine: “Control of available airpower must be centralized and command must be exercised through the air force commander if this inherent flexibility and ability to deliver a decisive blow are to be fully exploited.”³⁸

The above example draws its lessons learned from one of the largest conflicts in history, whereas the Italian air effort in Iraq drew support from a relatively small number of helicopters and Predators (10 and four, respectively). Unity of command, unity of effort, and

simplicity constitute fundamental principles of war that one must apply across the range of military operations and at all levels of war.³⁹ The Italian Predator operation should not have been an exception to this basic doctrine.

Consequences of Misplaced Operational Control

OPCON of the Italian Predators during Antica Babilonia resulted in several problems, such as inappropriate employment in relation to their capabilities and characteristics, slower decision-making processes, and confused target prioritization.⁴⁰ Simply “falling in on” the existing joint task force clearly showed a lack of operational innovation. For instance, the headquarters of the joint task force would request UAV support with little or no advance notice in response to the immediate tactical needs of ground troops, as if the Predators were an air-defense asset ready to be “scrambled.” This practice probably resulted from the Italian joint task force’s familiarity with the Pointer, a man-portable, low-altitude, short-range small UAV. However, a Predator, unlike a Pointer, needs at least one hour of ground checks, so by the time it reaches the area of operations, it is too late to meet the immediate intelligence requirements of ground forces. This procedure initially caused significant problems with the CAOC in Al Udeid because, although Italian helicopters did not require inclusion in the CAOC’s air tasking order, the Predators did. Predators, which usually fly at higher altitudes than helicopters, require air-traffic deconfliction. Failure to follow airspace-control orders and air-traffic procedures greatly increases the risk of a mishap with other aircraft flying in the same altitude block.

Because the CAOC included no Italian liaison officer, the Predator mission had no advocate and frequently lacked the information and coordination channels to make timely decisions. On several occasions, the author witnessed ineffective Predator missions because he could not obtain air-traffic deconfliction over busy areas such as Baghdad or last-minute changes to the air tasking order. Flights were sometimes cancelled at the last minute, result-

ing in frustration and wasted effort for both the Predator crews and the tasking agencies in Rome.

When broadcasting capability of satellite imagery became available and the chief of the permanent joint task force in Rome began to receive Predator imagery, strategic needs soon trumped tactical ones, and the C2 architecture appeared even more inappropriate than before. When, for example, other commands—such as the British in Basra or intelligence agencies in Rome—tasked specific strategic missions, only vague priority criteria existed to deconflict missions assigned at the tactical level. This situation forced the air component commander to seek clarification and case-by-case authorizations from Rome, a task made even more difficult by limited secure communications.

Since Predators originally “fell in” as an organic tactical asset under the deployed joint task force commander, no special mechanism was in place at higher levels of command to deal with immediate operational issues. There was no continuously functioning operations center with visibility or decisional authority over UAV missions in Rome, the source of many strategic Predator missions. One had to process necessary clearances during working hours, coordinate extensively with different offices, and—since no one was officially in charge—obtain authorizations from the highest levels. This resulted in confusion, frustration at all levels of command, a slower decision-making process, and unclear prioritization of missions. Additionally, some Italian joint task force commanders regarded Predators as a limited resource for the fulfilment of the Italian contingent’s mission in Iraq, despite the significant expenditure of money needed to rent the satellite bandwidth required to fly strategic missions tasked by Rome.⁴¹ These examples demonstrate why we must take a fresh look at our doctrine and ad hoc C2, particularly the assumption that UAVs should remain under a land component commander deployed in-theater.

In doctrinal terms, Americans have never assigned Predator OPCON to a commander deployed into a theater. The Italian choice

could prove dangerous because of the strong temptation to control these aircraft at the tactical level, which would prevent optimum employment and even abort operational innovation. In particular, one could conclude that Predators are too expensive if one uses them simply to watch what happens on the other side of the hill—a role for which Pointers and other kinds of UAVs have been specifically engineered. Imperfect understanding of the characteristics and missions of Predators could jeopardize the potential roles of UAVs in the Italian armed forces since their cost-effectiveness might appear insufficient.

In the near future, technology will offer Italians better opportunities to link Predator imagery to a strategic headquarters in Italy or a CAOC anywhere in the world. UAVs may have an attack role, and their flights will require integration into a more complex and robust air effort—likely at a CAOC. One will understand and employ them as more than a tactical asset, but current Italian C2 relationships and capabilities are not up to the task. Learning how to command and control UAVs from a distance takes time and resources—improvisation is not an option.

Operational Control: An Examination of Alternatives

Ultimately, one develops doctrinal principles from real-world experience.⁴² In Iraq, the chief of the permanent joint task force chose to delegate OPCON of UAVs to the national contingent commander, who, in practical terms, served as the land component commander deployed into the AOR (air force personnel comprised only 3 percent of the total Italian force).⁴³ This modus operandi—assigning OPCON of air assets to the deployed joint task force commander—has been used in every past Italian expeditionary joint operation, and the joint task force commander is usually an army officer. But since 1995 Americans have never assigned Predator OPCON to a deployed land component commander, and we should remember that US forces have accumulated more than a decade of operational experience with UAVs.

The first European deployment of US Predators occurred during Operation Nomad Vigil in April 1995 in support of Joint Task Force Provide Promise, based in Gjader, Albania. The joint task force's headquarters provided tasking through the Southern Region Joint Operations Intelligence Center in Naples, Italy. The NATO CAOC in Vicenza, Italy, performed the required airspace coordination.⁴⁴ The second European deployment occurred in March 1996 for Operation Nomad Endeavor in support of Operation Joint Endeavor, with Predators based in Taszar, Hungary. Tasking came from a forward element of US European Command through the US National Intelligence Cell at Vicenza, Italy. OPCON of the Predators remained with European Command, and NATO's CAOC exercised TACON.⁴⁵

One finds the same architecture in 1999 during Operation Allied Force in Kosovo, where the United States used Predators for the first time in the targeting role.⁴⁶ Before Allied Force, Predators could transmit targeting imagery to their operators on the ground as part of the intelligence-collection network. During the Kosovo operation, the Americans invented new processes to exploit Predator data feeds with advanced technology and procedures for analysis. Doing so enabled review of Predator video in real time, and analysts immediately provided pilots with the location of mobile Serb targets. In Afghanistan and Iraq, tasking came from US Central Command's CAOC in Al Udeid, while imagery was centrally analyzed in the United States, where operators remotely controlled the Predator missions and received imagery via satellite communications.⁴⁷ So, forward air-command elements exercised TACON only—limited to launching, recovering, and maintaining the aircraft; in none of these missions did the Americans delegate OPCON to a land component commander deployed in the AOR, as the Italians have done in Iraq.

This does not mean second-guessing Italian military planners since at the beginning of the operations, that was the only option available. In fact, until Predators reached full operational capability, one could broadcast their imagery only within the theater, so OPCON by

any element outside the theater would have destroyed the usefulness of near-real-time imagery. Surprisingly though, even the attainment of full capability on 17 February 2006 changed nothing in the C2 structure, raising the question "Why?"⁴⁸

One possible explanation is that the Italian Air Force has mainly deployed helicopters in past joint or combined expeditionary operations.⁴⁹ Typically considered an organic asset of terrestrial units according to Italian Army doctrine, helicopters have always remained under the OPCON of the deployed task force commander since they better served tactical, rather than strategic, roles. Over the years, this has reinforced a doctrinal mind-set that if one had to deploy land forces, any air asset (usually helicopters) would come under the authority of a land component commander, who also headed the joint task force. So when Predators first deployed to Iraq, a lack of operational experience and the absence of Predator doctrine led planners to assume they could be managed just like helicopters; thus, the deployed task force commander exercised OPCON of these aircraft. Another plausible reason for this choice is that the Italian joint task force already included a reconnaissance, surveillance, and target-acquisition army regiment equipped with Pointer UAVs.⁵⁰ The similar roles of Predators and Pointers may have led to the assumption that one could manage their C2 in the same way.

Recommendations

Based on the considerations discussed so far, what would represent the most appropriate C2 architecture for Italian Predators in future expeditionary operations? First, the Italian Air Force should review its air doctrine from an expeditionary perspective and articulate a strategic vision for near-term and midterm UAV operations. It should incorporate current and future UAV capabilities and missions for supporting the joint force with near-real-time reconnaissance and surveillance and possibly target acquisition, as well as widely accepted doctrine on C2.⁵¹ Additionally, UAV units

should support a single chain of command.⁵² The Italian experience in Iraq has confirmed what US doctrine recognized as early as 1993: when “UAV units are tasked to support more than one command . . . simultaneously, degradation of effectiveness can result.”⁵³

Second, UAV doctrine should also emphasize the appointment of a single air component commander, rather than two commanders, in order to grant better unity of command and simplicity. Deployed air units, typically a joint air task group, should remain subordinate to a single deployed commander with tactical command over all air assets and should receive a single air tasking order from the Italian air and space operations center (AOC), NATO CAOC, or coalition CAOC, depending on the nature of the conflict.

Third, doctrine should describe the roles of the national AOC and lay a foundation for determining the necessary capabilities and resources it requires.⁵⁴ The US Air Force has dedicated tremendous effort to standing up its AOCs as a “weapon system” to support joint

and coalition operations.⁵⁵ For instance, it awarded a \$589 million contract to Lockheed Martin Corporation to serve as the AOC Weapon System Integrator, evolving C2 centers to support net-centric joint and coalition operations worldwide.⁵⁶ Although the Italian Air Force may have neither the requirements nor resources to go this far, it does need to carefully determine the AOC’s role in the C2 of its UAVs, the ways in which it can play a role in better integrating UAV operations, and the resources it will apply toward the problem. Figure 2 provides a basic sample layout for future C2 architectures in expeditionary operations that assumes full connectivity with deployed UAVs: (1) a single, dual-hatted airman for helicopters (or other air assets) and Predators (unity of command and simplicity) and (2) Predator OPCON assigned to the Italian Air Force’s joint force air component commander in Italy and exercised through the AOC.

Giving OPCON of UAVs exclusively to the joint force air component commander will ensure command of air forces by an airman. The

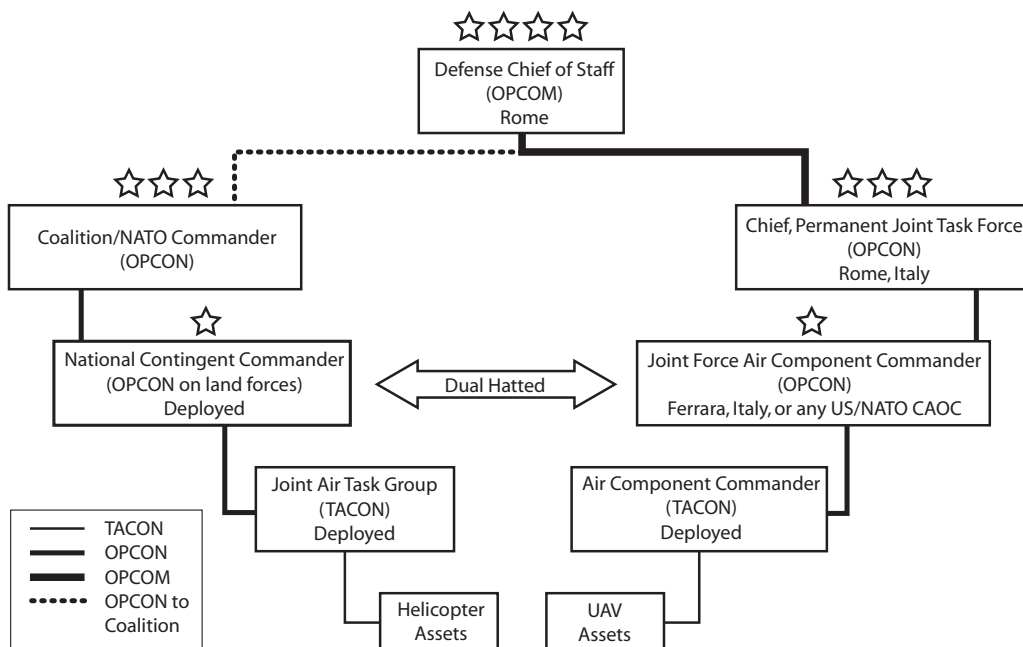


Figure 2. Suggested notional C2 structure for future UAV deployments

peculiarity of air assets in general, and Predators in particular, requires specifically trained personnel and consolidated experience in the C2 of the air domain—better achieved by an airman. AFDD 1 makes it clear: “The axiom that ‘airmen work for airmen, and the senior airman works for the joint force commander . . .’ not only preserves the principle of unity of command, it also embodies the principle of simplicity.”⁵⁷ As Predators and future UAVs move closer to Douhet’s original vision, becoming a decisive asset in a “true war of movement,” they will indeed require “swift intuition” and “swifter decision.” It follows, then, that we must empower the joint force air component commander to both command and control.

Conclusion

Antica Babilonia was the first military operation with Predator UAVs for the Italian armed forces. Because the general trend in military

aviation is toward unmanned systems, we must be ready. The Italian Air Force, in particular, must ensure that its unmanned-aviation technology is paired with sound, timely doctrine—starting with the fundamentals of C2.

If properly applied without overly bounding or restricting creativity, basic principles and tenets such as unity of command, unity of effort, simplicity, priority, airmen commanding airmen, and appropriate levels of C2 will offer a good starting point for future UAV doctrine. In the specific case of Predators, we should not limit lessons learned to Italian national experience. Rather, we must include other valuable perspectives, such as those of the Americans, since they have operated the same system worldwide for more than a decade. Our way forward will require not only an investment in technology but also an intellectual investment. As Douhet’s proud successors, we cannot morally afford to ignore his teachings. For the Italian Air Force, the time to change is now. □

Notes

1. *Wikipedia: The Free Encyclopedia*, s.v., “MQ-1 Predator,” http://en.wikipedia.org/wiki/RQ-1_Predator (accessed 8 February 2007).
2. Air Force Doctrine Document (AFDD) 1, *Air Force Basic Doctrine*, 17 November 2003, 1.
3. *Ibid.*, 3.
4. Quoted in *ibid.*, 2.
5. J. F. C. Fuller quoted in *ibid.*, 4.
6. *Ibid.*
7. Quoted in AFDD 2-8, *Command and Control*, 16 February 2001, 1. (This document was replaced by a new version as of 1 June 2007.)
8. Quoted in *ibid.*, 13.
9. “RQ-1 Predator MAE UAV, MQ-9A Predator B,” *GlobalSecurity.org*, 20 October 2006, <http://www.globalsecurity.org/intell/systems/predator.htm>.
10. AFDD 1, *Air Force Basic Doctrine*, 20.
11. *Ibid.*, 26.
12. *Ibid.*, 32.
13. Quoted in AFDD 2-8, *Command and Control*, 43.
14. *Ibid.*
15. Ministero della Difesa, “Comando Operativo di Vertice Interforze (COI), Cosa è,” 2003, <http://www.difesa.it/SMD/COI/cosa-è.htm>.
16. On 1 May 2003, from the aircraft carrier USS *Abraham Lincoln*, Pres. George W. Bush declared major com-

bat ended. “President Bush Announces Major Combat Operations in Iraq Have Ended,” *The White House*, 1 May 2003, <http://www.whitehouse.gov/news/releases/2003/05/20030501-15.html>.

17. “Multi-National Force-Iraq,” *SourceWatch*, 2 September 2006, http://www.sourcewatch.org/index.php?title=Multi-National_Force-Iraq. The national operational directive (*Direttiva Operativa Nazionale* in Italian) is the military directive describing the assigned mission and C2 relationship among units. *Direttiva Operativa Nazionale COI-O-153-R* (Roma: Comando Operativo di Vertice Interforze, April 2005).

18. The three generals held the following positions: chief, coalition operations (Multi-National Force-Iraq), deputy commander / ITSNR (Multi-National Corps-Iraq), and deputy commander (Multi-National Division-Southeast). *Direttiva Operativa Nazionale COI-OPR-153-R*. (Restricted) Information extracted is unclassified.

19. An Italian brigadier general was permanently appointed as deputy commander, Multi-National Division-Southeast. *Direttiva Operativa Nazionale COI-OPR-153-R*. (Restricted) Information extracted is unclassified.

20. *Wikipedia: L'enciclopedia libera*, s.v., “Guerra in Iraq” (see “Il coinvolgimento italiano”), http://it.wikipedia.org/wiki/Guerra_in_Iraq#Il_coinvolgimento_italiano (accessed 5 February 2007).

21. Direttiva Operativa Nazionale COI-OPR-153-R. (Restricted) Information extracted is unclassified.
22. Ibid.
23. Joint Publication (JP) 3-16, *Multinational Operations*, 7 March 2007, II-5.
24. NATO Standardization Agency, AAP-6 (2007), *NATO Glossary of Terms and Definitions (English and French)*, 2-T-2, <http://www.nato.int/docu/stanag/aap006/aap6.htm>.
25. Ibid., 2-O-3.
26. Ibid.
27. AFDD 1, *Air Force Basic Doctrine*, 93. The Italian armed forces refer to ADCON as *comando gerarchico*—typical of an air expeditionary unit commander. Normally, this authority includes tactical command over operational units, so the Predator's case has been an exception.
28. Ministero della Difesa, "Comando Operativo."
29. For this operation, the term *air component commander* identifies the UAV (only) air component commander. His authority did not affect helicopter assets, which remained under a separate authority (commander of the joint air task group). The author was UAV air component commander from December 2005 to May 2006. Direttiva Operativa Nazionale COI-O-153-R.
30. The joint air task group (*Reparto Operativo Autonomo* in Italian) was based on an air force helicopter squadron for combat search and rescue and a dual-role (attack and mobility) army squadron. Ibid.
31. AFDD 1, *Air Force Basic Doctrine*, 20.
32. The joint air task group was based on two air force squadrons (one equipped with helicopters for search and rescue and the other equipped with Predators for intelligence, surveillance, and reconnaissance missions) and one army squadron (equipped with attack helicopters).
33. The air component commander reported daily and quarterly to the Italian Comando Operativo Forze Aeree (COFA), based in Poggio Renatico (Ferrara), Italy. Commanded by the joint force air component commander, the COFA had only logistic support authority over Predators. Nevertheless it received quarterly reports from the air component commander and joint air task group commander, as the air force command.
34. Official news of the Predator accident was reported to the joint force air component commander in Italy in May 2006 at the COFA during a briefing by the air component commander on the postmission report. This information has also appeared in the quarterly Operation Antica Babilonia report, but details remain classified. On the Web, one can find general information in specialized international magazines. See "Italian Predator Crashes in Iraq," *Air-Attack.com*, 18 May 2006, http://www.air-attack.com/news/news_article/1617/Italian-Predator-Crashes-in-Iraq.html.
35. Author's participation in postmission briefings and experience drafting procedures for Predator recovery in Operation Antica Babilonia.
36. AFDD 1, *Air Force Basic Doctrine*, 20.
37. Ibid., 29.
38. AFDD 2-8, *Command and Control*, 5.
39. JP 3-0, *Joint Operations*, 17 September 2006, II-1.
40. "Operazione Antica Babilonia," Air Component Commander Quarterly Report (Poggio Renatico: Comando Operativo Forze Aeree, May 2006).
41. Ibid.
42. AFDD 1, *Air Force Basic Doctrine*, 7.
43. Direttiva Operativa Nazionale COI-O-153-R (Roma: Comando Operativo di Vertice Interforze, April 2005).
44. "RQ-1 Predator MAE UAV, MQ-9A Predator B."
45. Ibid.
46. *Statement of General John P. Jumper, Commander, United States Air Forces in Europe*, 106th Cong., 1st sess., 26 October 1999, <http://house.gov/hasc/testimony/106thcongress/99-10-26jumper.htm>.
47. According to the author's experience in the daily UAV tasking process in Tallil, all Predator missions had to be coordinated with US Central Command Air Forces' CAOC in Al Udeid, Qatar, which disseminated the air tasking order after the appropriate air-traffic deconfliction.
48. "Operazione Antica Babilonia."
49. After World War II, Italian tactical aircraft have flown in joint and combined combat operations in only two cases: Operation Desert Storm (17 January 1991, the first combat mission since World War II) and Allied Force in 1999. "L'Aeronautica Militare Oggi: La Guerra del Golfo," *Aeronautica Militare*, 9 September 2002, <http://www.aeronautica.difesa.it/SitoAM/Default.asp?idsez=21&idarg=25&idente=1394>; and *Wikipedia: L'enciclopedia libera*, s.v., "Operazione Allied Force" (see "La partecipazione italiana"), http://it.wikipedia.org/wiki/Operazione_Allied_Force#La_partecipazione_italiana.
50. Direttiva Operativa Nazionale COI-O-153-R.
51. Unlike the US Predator, the current version of the Italian Air Force's Predator lacks target-designation capability.
52. JP 3-55.1, *Doctrine for Reconnaissance, Surveillance, Target Acquisition and Support for Joint Operations*, 14 April 1993. Even if it is no longer current, this publication underlines some capstones and tenets that remain important, such as those in chapter 2, "Employment." See http://www.fas.org/irp/doddir/dod/jp3-55_1/3-55_1c2.htm.
53. Ibid.
54. The Italian AOC is presently embedded in a major command—the COFA (see note 33), colocated with NATO's CAOC 5 in Poggio Renatico, Italy. This means that the integration between the national and NATO C2 functions could also be enhanced for future coalition UAV operations if NATO's joint force air component commander and his AOC exercise OPCON.
55. The Air and Space Operations Center - Weapon System, AN/USQ-163 Falconer, for example, is the senior element of the US theater air control system. The cost of this program in 2004 was \$26.982 million. See various unclassified exhibits regarding the Air and Space Operation Center - Weapon System, February 2005, <http://www.dtic.mil/descriptivesum/Y2006/AirForce/0207410F.pdf>.
56. John McHale, "ESC Awards \$589 Million AOC Weapon-System Integrator Contract," *Military and Aerospace Electronics*, October 2006, http://mae.pennnet.com/articles/article_display.cfm?article_id=275862.
57. AFDD 1, *Air Force Basic Doctrine*, x.

Military Institutional Communication

Its Geostrategic Importance

DR. ALEXANDRE SERGIO DA ROCHA*

Editorial Abstract: Foreign-language military journals such as Air and Space Power Journal in Portuguese have supported US national policy since the 1940s by disseminating the Air Force's operational concepts and fostering coalition military operations. Dr. da Rocha, a Brazilian professor, highlights the strategic importance of the world's Portuguese-speaking nations, contending that journals published in languages other than English are especially vital for building international understanding among militaries.

SINCE THE END of World War II, the US military has recognized the importance of military institutional communication and has used academic-professional journals as a prime medium for conducting it. Reading the editorial in the fourth-quarter 1999 issue of *Airpower Journal*, Brazilian edition (now *Air and Space Power Journal em Português*), one discovers that the Portuguese and Spanish editions of the *Journal*, originally called *Air University Quarterly Review*, began with a letter dated 1 December 1948 from Gen George C. Kenney, Air University commander, to Gen Hoyt S. Vandenberg, chief of staff of the US Air Force (USAF). General Kenney asked for permission to launch the aforementioned foreign-language publications.¹ By granting permission, the USAF followed the example set by the US Army, whose professional journal, *Military Review*, had appeared in Spanish and Portuguese since 1945. In fact, the USAF swiftly embraced the cause of foreign-language institutional communication because the Spanish and Portuguese editions of *Air University Quarterly Review* began only about one year after the USAF became an independent service in 1947. The journal's name later changed from



Airpower Journal to *Aerospace Power Journal* and then, more recently, to *Air and Space Power Journal* (ASPJ), but the effort has continued uninterrupted for more than 50 years, and its purpose has never changed.

Many senior military leaders from the United States and Spanish- and Portuguese-speaking countries have expressed their appreciation for the contribution made by the

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foreign-language editions of the *Journal*, as we can read in the 50th-anniversary commemorative issues of both those journals from 1999. However, their messages are not just congratulatory in nature. In fact, they provide an assessment of the publication's value to the USAF and the air forces of countries that comprise the target audience of these editions.

Referring to the journals, Gen Lloyd W. "Fig" Newton, then commander of Air Education and Training Command, commented, "Through the years, their thought-provoking articles have helped provide the intellectual framework for our institutions and *have promoted significant operational advancements*" (emphasis added).² Maj Gen (Brigadeiro) José Américo dos Santos, then commander of the Brazilian Air Force University/Air War College, pointed out that the Portuguese edition was relevant and instrumental for "updating data regarding military equipment and employment doctrine."³ He also declared that "*Airpower Journal* has . . . becom[e] the reference publication of choice in the country's professional military education environment."⁴ Gen Michael E. Ryan, then the USAF chief of staff, noted that

both Latin American editions have become widely read and respected by airmen throughout the more than 25 Spanish- and Portuguese-speaking countries of the Western Hemisphere, Europe, and Africa. The journals *disseminate core USAF doctrine, strategy, policy, operational art and current issues*. Both editions *play a very important role in strengthening our relationship with their air force audiences*. They also *serve to educate, develop and nurture these officers* as their careers progress. By shaping the dialogue among airmen, the journals bring them closer together across the geographical and cultural lines separating them.⁵ (emphasis added)

So one can see that the medium for military institutional communication with Spanish- and Portuguese-speaking countries initiated by the USAF immediately after its own inception has had a specific goal of "disseminat[ing] core USAF doctrine, strategy, policy, operational art and current issues" (General Ryan's words) in order to promote "significant operational advancements" (General Newton's words).

This article makes three points. First, dissemination of *core USAF doctrine, strategy, policy, operational art, and current issues* in order to promote *significant operational advancements* is very important—if not essential—to supporting US military activities worldwide in defense of US national-security interests. This claim was true in the aftermath of World War II and is even more so today in an era when combined military operations and coalition warfare are clear US foreign-policy imperatives. Second, academic-professional journals in languages other than English are particularly appropriate for reaching the goals of USAF leaders, mentioned above. Third, due to geostrategic considerations, the existence of specialized vehicles for military institutional communication in Portuguese is even more imperative today than it was 59 years ago, when General Kenney asked for approval to publish what is now the Portuguese edition of *ASPJ*.

The Need to Share Knowledge

In her article "Operation Iraqi Freedom: Coalition Operations," Squadron Leader Sophy Gardner, Royal Air Force, writes that

we, the US and UK militaries, left the end of phase three of Operation Iraqi Freedom having worked successfully as a coalition and having faced practical challenges along the way. We can see that these were largely overcome through a combination of fortuitous timing (an extended planning period), strong personal relationships (particularly at the senior levels), mutual dependence and burden sharing . . . and a motivation to find common ground and to engineer solutions to any problems that threatened the coalition's integrity. Most importantly, trust was established at all levels. For the future, whether we consider either mindset, doctrine, and culture, or equipment, concept of operations, and interoperability—it is *mutual cooperation and contact* which will provide us with the best chance of staying in step.⁶ (emphasis added)

Lt Col Frank M. Graefe of the German air force expressed similar concepts in his article "Tomorrow's Air Warfare: A German Perspective on the Way Ahead":

Due to the United States' military-pioneering role and technological superiority, that country will predominantly determine the developments in warfare over the next several decades. Therefore, one would do well to take a closer look at the *US policy documents and strategy papers* that will govern such developments and to draw lessons from the US conduct of operations during Operation Iraqi Freedom. Doing so will help identify the changes that coalition partners of the United States have to follow *in order to ensure compatibility in terms of the conduct of operations*.⁷ (emphasis added)

Awareness of the need for mutual understanding between the US military and its military allies seems so important to US policy makers that a number of schools in the United States afford the opportunity for contact among these militaries. Such is the case with Air War College, Air Command and Staff College, and Squadron Officer School, all located at Air University, Maxwell AFB, Alabama; Command and General Staff College, Fort Leavenworth, Kansas; Army War College, Carlisle Barracks, Pennsylvania; Naval War College, Newport, Rhode Island; Naval Postgraduate School, Presidio of Monterey, California; as well as the Inter-American Defense College; National Defense University; and the Center for Hemispheric Defense Studies, all located in Washington, DC.

At these institutions, the mutual cooperation and contact (mentioned by Squadron Leader Gardner) to foster compatibility in terms of the conduct of operations (pointed out as an interoperability requirement by Lieutenant Colonel Graefe) do effectively occur. In fact, such contact also offers a way to better familiarize allied militaries with US military doctrine, strategy, policy, and operational art and to enable significant operational advancements. These outcomes are also important products of the successful USAF institutional-communication efforts by the foreign-language *ASPJ* editions because operational advancements are a prerequisite for interoperability. When people must work together, knowledge sharing becomes essential as a basis for achieving shared understanding. Whether involving the meaning of words denoting specific activi-

ties through the proper working of weapon systems and tools for guidance, communication, and so forth, or the commander's expectations about the strategic and operational performance of troops under his or her watch, without shared understanding, misunderstandings will certainly occur—and misunderstandings in warfare oftentimes lead to death and undesired destruction.

The Need for Military Institutional Communication in Languages other than English

Regardless of the value of contacts among militaries of different countries, they do not constitute a suitable replacement method for disseminating core USAF doctrine, strategy, policy, operational art, and current issues through academic-professional journals—the main source of what Gen José Américo referred to as updating data regarding military equipment and employment doctrine.

The Need to Publish in Languages other than English

Today one can imagine deeming English an international language. If so, then English-language media for military institutional communication would achieve the objective of disseminating core USAF doctrine, strategy, policy, operational art, and current issues in order to promote significant operational advancements. This, however, is not the case.

Col John Conway's article "The View from the Tower of Babel: Air Force Foreign Language Posture for Global Engagement" discusses the need for proficient foreign-language speakers in the Air Force to assure appropriate mutual understanding and operational effectiveness when American troops interact with personnel from non-English-speaking countries during military operations.⁸ Such mutual understanding requires (1) that people speak a common language, and (2) that they communicate in the other country's language instead of in English. Thus, the USAF understands that it should not expect effective conveyance of its message to allies without providing US per-

sonnel proficient in foreign languages—even to deal with the simplest matters concerning situations of everyday life. In terms of disseminating core USAF doctrine, strategy, policy, operational art, and current issues in order to promote significant operational advancements—certainly a more subtle and complex matter—one could not expect full understanding without expressing the ideas in the foreign reader's own language. Again, to recall the ideas of Squadron Leader Gardner and Lieutenant Colonel Graefe, such an understanding is essential to interoperability.

Moreover, military institutional communication is *not directed only* to a military audience whose interests could focus on topics such as technical instruction, knowledge about advances in available war-fighting technology, doctrine, and operational art. One must pay attention to other issues beyond the specific aspect of military interoperability. For example, through military institutional communication, foreign military and civilian leaders can become better informed about US military goals and procedures. Having these leaders understand this information can prove crucial to American interests when a country has to decide whether or not to participate in US-led coalitions or vote for or against American interests on relevant matters of common defense or foreign policy in international deliberating forums. Because democracy is gradually becoming a global way of life, one cannot, in turn, restrict such decisions to a national elite or an oligarchy. Rather, the decision needs to find legitimacy among the other country's population.

In his article "Planning for Legitimacy: A Joint Operational Approach to Public Affairs," Maj Tadd Sholtis shows the importance of legitimacy as a center of gravity for military public affairs:

Legitimacy derives from real and readily apparent behaviors or effects that define the functional relationships between the military and key publics. Domestically, such behaviors would include the extent of political maneuvering or public protests against military actions, imposed tactical restrictions on fire and maneuver, and blows to unit morale, defense spending and mili-

tary recruiting. Abroad, legitimacy will affect the military contributions of our allies, basing options, transportation routes for force deployment and re-supply, and grassroots support for terrorist or insurgent attacks against U.S. forces, among other considerations. . . .

. . . Legitimate military operations will promote public expressions of support from a wide variety of non-aligned sources: national leaders or their official spokespeople, international organizations, political or special interest groups, other opinion leaders like academics or clerics, or populations as a whole.⁹

So legitimacy can be essential to the success of military operations, especially in coalition warfare.

Legitimacy implies conforming to recognized principles or accepted rules and standards, which brings about, in people affected by a decision or action whose legitimacy comes under scrutiny, the willingness to bear the results of such a decision or an action. Of course, good information about the basis and justification for the decisions or actions at stake serves as a fundamental part in building their legitimacy. The dissemination of good information requires making it available in the language of the people whose acknowledgment of the legitimacy of such decisions or actions one desires. Therefore, military institutional communication has relevance to disseminating information about technology, doctrine, and operational art. This communication perhaps becomes even more important to instilling within the population of a country whose support for those actions one desires, the idea of legitimizing planned or executed military actions. One can view recent decisions to begin publishing Arabic, French, and Chinese editions of *Air and Space Power Journal* as supporting this reasoning. Thus it seems clear that a country with global interests, such as the United States, must maintain a significant effort in military institutional communication in languages other than English.

The Utility of Academic-Professional Journals

Academic-professional journals meet the requirements of disseminating ideas and retain-

ing legitimacy. First, they are essential for updating the target audience's information on issues that concern them. Indeed, the number of military officers who become aware of technological innovations or innovative strategic analyses by reading academic-professional journals is far greater than the number of those who can leave their units for an extended time to learn or participate in exchange programs with professional-military-education institutions abroad. Also, journals can reach a greater variety of audiences, including academics, decision makers, and people at large who have an interest in political and strategic studies. Such individuals exercise a multiplier effect merely by conveying the acquired ideas to other people and offering new ones emerging from reflection about what they have learned through the journals. In this case, they present feedback that generates debate and helps to illuminate technical issues as well as promote intellectual solidarity among researchers who participate in the conversation—both effects are important to accomplishing the goals of military institutional communication. Moreover, if the journal maintains high academic standards, it acquires intellectual prestige, which adds value to the information the journal conveys, making the published information automatically worthy of attention and reflection from potential readers. Now comes the legitimacy issue.

Legitimacy is far better attained by means of open and serious debate through an academic journal than through propaganda. Free and good-faith academic debate seeks to reach a consensus, which means a “kind of collective consciousness attained as a result of rational discussion.”¹⁰ Consensus contrasts with *homonoia*, a Greek word literally meaning *sameness of minds* and connoting a “kind of collective consciousness attained through an emotional venue, resulting from behavioral conditioning through the employment of rites, forceful discipline and other means—more or less subtle—to crystallize reflexes.”¹¹

History clearly shows that consensus serves as a typical source of decisions in democracies, while dictatorships—especially those that disguise themselves by adopting some external

trappings of democracy—use *homonoia* as a preferred tool for manipulating people. So a procedure of institutional communication that self-imposes the constraints of a rational discussion conducive to consensus benefits from a net advantage as a foundation for legitimacy. This is precisely what happens in the case of academic-professional journals.

Geostrategic Considerations in Finding Target Audiences for Military Institutional Communication

Having established that military institutional communication with non-English-speaking countries must occur through academic-professional journals in languages other than English, we must examine which languages deserve preference. In fact, budgetary constraints always impose the need for choices based on priorities. As mentioned before, more than 50 years ago the USAF, like the US Army, became aware of the usefulness of publishing journals in Spanish and Portuguese for military institutional communication. One can easily understand the choice of the Spanish language for a journal on the grounds of obvious US interests in Spanish-speaking countries located in its neighborhood—Mexico and Central American countries—whose citizens comprise a significant percentage of the US population. But why Portuguese?

In his article “Origins of Western Hemispheric Defense: Airpower against the U-Boats,” Maj Roger J. Witek comments on the geostrategic importance of the South Atlantic from an airpower point of view. In his discussion, the South Atlantic means primarily Brazil and Argentina, one a Portuguese-speaking country and the other Spanish-speaking.¹² Taking into account the role played by different countries during World War II, one sees that negotiations which led to the establishment of a US air base in the Brazilian city of Natal, essential to US military operations in North Africa, reflect Brazil's geostrategic importance. However, a classic geostrategic analysis of Brazil's

stature in the international equation lies beyond the scope of this article. Among the reasons for not conducting such an analysis are innovations in war-fighting technology that have brought significant changes to the strategic meaning of several variables that one should consider.

Hence, we will look for more objective parameters to help make our point. We base our contention that the Portuguese language has been and remains indispensable to US military institutional communication on the values of a potential indicator (PI)—an index of the geostrategic relevance of various countries in the world, based on variables traditionally associated with expectations of a country's possibly becoming a world power. After classifying the countries of the world by PI, one sees that Brazil merits a significant communication effort in its language.

The Potential Indicator—Trying an Objective Analysis

Building indicators is a traditional technique for quantifying variables relevant to measuring a phenomenon. When such measurement depends on several variables, the numerical indicator that measures it must consist of a composite of those variables, and the indicator's value must be directly proportional to the variables positively correlated with the phenomenon—as well as inversely related to those negatively correlated with it.

Traditionally, one evaluates a country's potential in the psychosocial, political, economic, and military realms. Thus, the PI proposed here consists of a composition of meaningful variables from these four realms of national power. Moreover, for optimum usefulness, one must build the indicator on variables with objectively measured, well-known, and available values for every element—in this case countries—that we compare. Therefore, we have chosen the following variables: population (psychosocial), territorial area (political), gross national product (GNP) (economic), and military expenditures (military).

These variables are widely acknowledged as partial PIs. One usually deems countries with large populations and vast territories potential

world powers. Analysts commonly rank the world's economies by GNP values—well-known, widely employed economic indicators. Military expenditures synthesize several variables, encompassing not only the size of the military but also its technological sophistication, factoring in the relationship between weapon complexity and expenditure. Both features seem reasonable criteria for gauging potential military effectiveness. Additionally, military expenditure has the advantage of taking into account aspects related to science and technology, at least in military applications. The product of these four variables for each country represents its PI value. To ensure uniformity of data, we have drawn the variables' values from the current edition of *The World Factbook*, published by the Central Intelligence Agency. Since that reference does not include the value for Russian military expenditures, we obtained that figure from the Web site of the Armed Forces of the Russian Federation. For Russia, despite the lack of assurance of methodological uniformity in obtaining the value, one may reasonably assume that values do not diverge by an order of magnitude. Because our analysis uses orders of magnitude only, an occasional discrepancy will not invalidate the argument.

To validate this indicator, we applied it to countries usually considered the most important in the world through the use of the size-of-economy criterion, as shown by those nations' respective GNP values. The results validate PI as an indicator of relevance on the world scene (table 1). The table does not show Portuguese- and Spanish-speaking countries because they appear in tables 2 and 3. One can see that the PI values reflect the importance generally associated with countries. Specifically, the calculus of the US PI is consistent with its position as the world's sole superpower. The Russian PI reflects the country's importance after the collapse of the Soviet Union.

We can also determine the PI for countries to which the USAF distributes Portuguese and Spanish editions of *ASPJ* (tables 2 and 3). Table 2 shows that the Brazilian PI greatly exceeds that of any other Portuguese-speaking

Table 1. PI values for states whose GNP exceeds 1×10^{12} US dollars

	A <i>Population</i> $\times 10^6$ people	B <i>Territorial area</i> $\times 10^6$ km ²	C <i>GNP</i> \times US\$ 10^9 (PPP) ^a	D <i>Military expenditure</i> \times US\$ 10^9	<i>PI</i> (integer part of AxBxCxD)
World	6,446.131	148.940	59,380	750.000	42,757,463,462,020
United States	295.734	9.631	12,370	370.700	13,060,654,048
China	1,306.314	9.597	8,158	67.490	6,902,496,661
Japan	127.417	0.378	3,867	45.841	8,537,829
India	1,080.264	3.288	3,678	18.860	246,385,489
Germany	82.431	0.357	2,446	35.063	2,523,854
United Kingdom	60.441	0.245	1,867	42.836	1,184,271
France	60.656	0.547	1,816	45.000	2,711,374
Italy	58.103	0.301	1,645	28.182	810,780
Russia	143.420	17.075	1,535	18.000	67,663,010
Canada	32.805	9.985	1,077	9.801	3,457,596

Source: Central Intelligence Agency, *The World Factbook* (Washington, DC: Central Intelligence Agency, 2006), <http://www.odci.gov/cia/publications/factbook> (accessed 6 March 2006). Data on Russian military expenditures comes from Armed Forces of the Russian Federation, <http://www.ufaqs.com/wiki/en/ar/Armed%20Forces%20of%20the%20Russian%20Federation.htm>.

^aGNP in purchasing power parity (PPP) (US dollars)

country. Table 3 shows that Mexico has the greatest PI among Spanish-speaking countries.

One can also categorize countries by the order of magnitude of their PI (table 4). Three countries have PIs of an *extremely high* order of magnitude: the United States, China, and India. Such values reflect the geostrategic importance of China and India, demon-

strated by the special-status policies applied to these countries by the United States—for instance, US agreements to provide India with the latest generation of weaponry without requiring interruption of that country's nuclear program. Brazil follows Russia in an intermediate category—*very high* PI—between the three gigantic countries

Table 2. Portuguese-speaking countries (target audience for the Portuguese edition of *ASPJ*)

	A <i>Population</i> $\times 10^6$ people	B <i>Territorial area</i> $\times 10^6$ km ²	C <i>GNP</i> \times US\$ 10^9 (PPP) ^a	D <i>Military expenditure</i> \times US\$ 10^9	<i>PI</i> (integer part of AxBxCxD)
Angola	11.827	1.247	28	0.184	76
Brazil	186.113	8.512	1,580	11.000	27,533,289
Cape Verde	0.418	0.004	3	0.014	0
Guiné-Bissau	1.416	0.036	1	0.009	0
Mozambique	19.407	0.802	26	0.117	47
Portugal	10.566	0.092	195	3.497	663
Sao Tome and Principe	0.187	0.000001	0.2	0.0007	0
East Timor	1.041	0.015	0.4	0.004	0

Source: Central Intelligence Agency, *The World Factbook* (Washington, DC: Central Intelligence Agency, 2006), <http://www.odci.gov/cia/publications/factbook> (accessed 6 March 2006).

^aGNP in purchasing power parity (PPP) (US dollars)

Table 3. Spanish-speaking countries (target audience for the Spanish edition of ASPJ)

	A <i>Population</i> <i>x10⁶ people</i>	B <i>Territorial</i> <i>area</i> <i>x 10⁶ km²</i>	C <i>GNP</i> <i>x US\$ 10⁹</i> <i>(PPP)^a</i>	D <i>Military</i> <i>expenditure</i> <i>x US\$ 10⁹</i>	PI <i>(integer part of</i> <i>AxBxCxD)</i>
Argentina	39.538	2.767	537	4.300	252,619
Bolivia	8.858	1.099	24	0.132	31
Colombia	42.954	1.139	303	3.300	48,920
Chile	15.981	0.756	181	3.430	7,501
Costa Rica	4.016	0.051	40	0.064	1
Dominican Republic	9.050	0.049	59	0.180	5
El Salvador	6.705	0.021	34	0.157	1
Spain	40.341	0.505	1,014	9.906	204,632
Ecuador	13.364	0.284	53	0.655	132
Guatemala	12.014	0.109	21	0.202	6
Honduras	6.975	0.112	21	0.101	2
Mexico	106.203	1.973	1,066	6.043	1,349,813
Nicaragua	5.465	0.129	16	0.032	0
Panama	3.140	0.078	22	0.147	1
Paraguay	6.348	0.407	31	0.053	4
Peru	27.926	1.285	169	0.829	5,028
Uruguay	3.416	0.176	33	0.257	5
Venezuela	25.376	0.912	162	1.678	6,291

Source: Central Intelligence Agency, *The World Factbook* (Washington, DC: Central Intelligence Agency, 2006), <http://www.odci.gov/cia/publications/factbook> (accessed 6 March 2006).

^aGNP in purchasing power parity (PPP) (US dollars)

Table 4. Distribution of countries according their PI values

<i>Extremely High</i> <i>Order of Magnitude</i> <i>(≥10⁸)</i>	<i>Very High</i> <i>Order of Magnitude</i> <i>(10⁷)</i>	<i>High</i> <i>Order of Magnitude</i> <i>(10⁶)</i>	<i>Fairly High</i> <i>Order of Magnitude</i> <i>(10⁵)</i>	<i>Significant</i> <i>Order of Magnitude</i> <i>(between</i> <i>10³ and 10⁴)</i>
United States China India	Russia Brazil	Japan Canada France Germany Mexico United Kingdom	Italy Argentina Spain	Colombia Chile Venezuela Peru

(United States, China, and India) and powers such as Japan, Canada, France, Germany, Mexico, and the United Kingdom. One should note that Mexico follows the main European countries and Japan, even though its PI is an order of magnitude lower than Brazil's. Ar-

gentina is located between Italy and Spain in the group whose PI is an order of magnitude smaller than Mexico's—*fairly high* PI. Among Spanish-speaking countries, we find Colombia, Chile, Venezuela, and Peru in the *significant* PI category.

PI as a Leading Criterion for Military Institutional Communication

PI offers an objective criterion to assert a language's geostrategic importance, putting aside fallacious reasoning, which could distort sound judgment. For instance, some people pay attention to the number of countries that share a language as their native tongue—an immaterial observation. Each country is a distinct political entity, with different people and governments expressing different interests and political wills on the world scene. English has acquired its present global relevance because it is the language of the world's sole superpower, not because it is the language of a number of countries without any geostrategic meaning—or because of the number of English speakers around the world.

One should note that during the apogee of the British Empire, no one acknowledged English as the international language because, regardless of the United Kingdom's status as a very important world power, its geostrategic level of importance was comparable to that of other colonial powers. Only after the United States became a superpower, especially after its rise to the status of sole superpower, did English become the world's lingua franca. Similarly, the relevance of Spanish to US military institutional communication has no relationship to the number of Spanish-speaking countries or Spanish speakers. Rather, the prominence of that language reflects the existence of countries such as Mexico (whose PI has an order of magnitude of 10^6) and Argentina (whose PI has an order of magnitude of 10^5).

Of course, in specific cases one must take into account geostrategic considerations other than PI. For instance, one cannot analyze Portugal and Spain by their PI while ignoring their pertinence to the European Union. In this sense, Argentina's PI is more relevant to a geostrategic analysis of Argentina than Spain's PI is to Spain because the latter, as a member of the European Union, finds itself in a different context. Likewise, specific American interests in Central America and the Caribbean make the countries in those regions a source

of special concern in US foreign policy, independently of their PIs.

However, since Brazil has a PI just below that of the three giants (United States, China, and India) and Russia, and above that of Japan, Canada, France, Germany, Mexico, and the United Kingdom, the US military cannot afford to lack Portuguese-language media for military institutional communication. Therefore, Portuguese editions of professional military journals merit continued priority from the US military leadership. Furthermore, such a quantitative argument corresponds with qualitative considerations when one notes the increasing influence of Brazilian foreign policy in Portuguese-speaking African countries such as Angola and Mozambique—regionally relevant countries whose PI analysis lies beyond the scope of this article. However, the recent decision to publish a French edition of *Air and Space Power Journal*, aimed at reaching primarily the French-speaking African countries, shows that the USAF recognizes Africa's growing geostrategic importance. Moreover, the position of Brazil in South America and its policy of continental integration—inscribed as a rule in the Brazilian constitution as of 1988—extend its influence to Spanish-speaking neighbors with fairly significant PIs.

As a matter of fact, US officials have made a number of comments regarding Brazil's geostrategic importance. During her confirmation hearing before the Senate Foreign Relations Committee after being nominated by Pres. George W. Bush as secretary of state, Condoleezza Rice declared that "the U.S. relationship with Brazil is 'extremely critical to the region' [and] applauded Brazil's leadership of the U.N. stabilization mission in Haiti."¹³ During his visit to Brasilia, Brazil's capital, on 6 November 2005, President Bush remarked, "Relations between Brazil and the United States are essential."¹⁴ Another US official, Commerce Deputy Secretary David Sampson, stated that "the United States and Brazil are 'close friends' and that strong U.S.-Brazil leadership is important for the Latin American region."¹⁵

However, one finds the most expressive synthesis of Brazil's present relevance on the

world scene in an article titled “Eyes on the Americas,” which comments on Canada’s connections with Latin America and describes Brazil as “an emerging priority”:

While multilateral cooperation in the hemisphere is critical, Canada’s relations with individual countries of the region are also vital. A key tie is with Brazil, an emerging giant comprising half of South America’s population and GDP [gross domestic product], identified in Canada’s recent International Policy Statement as a priority nation.

“Brazil is a major, sophisticated and influential player on the multilateral scene, whether it is in world trade negotiations as leader of the G20 or in UN peacekeeping operations,” notes Florencia Jubany, a senior policy analyst at the Canadian Foundation for the Americas (FOCAL) in Ottawa. “Brazil is also a central actor in the Americas, and shares many points of convergence with Canada’s own foreign policy.”

Jamal Khokhar, Director General of the Latin America and Caribbean Bureau at FAC [Foreign Affairs Canada], says that Canada and Brazil “not only share a hemisphere, they share goals, priorities and—perhaps most important of all—values.” This makes the two countries natural partners, he says. “We are living in a world of rising powers and Brazil is one of those powers. Canada appreciates Brazil’s leadership and believes it can make a difference in the hemisphere.”¹⁶

Brazil is a force behind South American integration and has played a moderating role, which is critical given the economic hardships in neighboring Andean nations such as Bolivia and Ecuador and the potential for political unrest there.¹⁷ Brazil’s consistent adherence to the principle of people’s self-determination worldwide and to the strengthening of its own democracy instills in its neighbors the confidence to make the Brazilian government’s formal or informal mediation a factor of stability in South America. Moreover, the good personal relations cultivated by Brazilian president Luis Inácio Lula da Silva with President Bush as well as South American leaders such as Argentinean president Nestor Kirchner, Venezuelan president Hugo Chavez, and Bolivian president Evo Morales facilitate inter-

national dialogue and enhance the already acknowledged geostrategic importance of Brazil.

The Portuguese Edition of *Air and Space Power Journal*: A Success Story

One can cite the Portuguese edition of *ASPJ* as an example of the USAF’s successful efforts in military institutional communication. Indeed, General José Américo writes that “*Airpower Journal* has established itself as an important vehicle for the exchange of ideas and has created a partnership between [the US Air Force’s] Air University and the Brazilian Air University.”¹⁸ Numerical data reinforces the veracity of his assessment (table 5). The number of articles by Portuguese-speaking authors published in the English and Portuguese editions of *ASPJ* since 2000 is impressive. The existence of the *Journal*’s Portuguese edition enabled the contribution of 24 Portuguese-speaking authors, who wrote 26 articles. During the same period, the *Journal*’s English edition published five articles by Portuguese-speaking authors. The Portuguese edition creates a valuable venue that allows English- and Portuguese-speaking militaries to exchange ideas about professional topics.

Table 5. Number of contributions to *ASPJ* by Portuguese-speaking authors

Year	ASPJ (English)	ASPJ (Portuguese)
2000		4
2001	1	2
2002		1
2003		1
2004		4
2005	2	4
2006	1	6
2007	1	4
Total	5 ^a	26 ^b

Source: Data provided by *ASPJ* staff.

^aThe five articles were written by four different authors.

^bThe 26 articles were written by 24 different authors.

Conclusion

Since the end of World War II, the US military has been aware of the importance of using journals to disseminate core US doctrine, strategy, policy, operational art, and current military issues for the benefit of militaries from non-English-speaking countries. That is why academic-professional journals such as the Spanish and Portuguese editions of *Military Review* and *Air University Quarterly Review*—now *Air and Space Power Journal*—have come about. Such publications provide information to the US military's allies concerning defense policies, strategy, military technology, military organization, and many other topics needed to enhance interoperability in case of participation in combined war-fighting operations.

Academic-professional journals serve several purposes. They promote debate, offer innovative solutions to problems, and disseminate information that allows easier understanding and more favorable analysis of US military activities by both military and civilian officials, as well as people interested in political and strategic studies. Such dissemination is also part of an effort to build a sense of legitimacy among allies regarding American military activities, generating the political and military support needed in coalition warfare.

The use of languages other than English is indispensable despite the increasing number of people familiar with that language. Indeed, full understanding of complex matters requires communication in the speaker's or reader's native tongue. It is not a coincidence that Spanish and Portuguese were the very first languages chosen for such a dissemination of knowledge. In fact, this choice was a response

to a geostrategic need in the aftermath of World War II that remains fully valid today.

One should avoid simplistic criteria for choosing the languages to promote military institutional communication. For example, the number of countries or individuals who speak a particular language is immaterial compared to objective geostrategic considerations. Rather, a quantitative PI comprised of population, territorial area, GNP, and military expenditures can better measure the relative prominence of nations. The PIs of various countries can differ by orders of magnitude. The United States, as the world's sole superpower, has a PI whose order of magnitude is 10^{10} , followed by China (10^9), India (10^8), and Russia and Brazil (both 10^7). Among Spanish-speaking countries, Mexico has the greatest PI (10^6).

PI is an objective criterion of geostrategic importance whose analysis validates the priority of the Portuguese language in the US military's efforts in institutional communication. Of course, this does not suggest that the Spanish language or efforts driven by other strategic considerations are not worthy. Instead, this article makes the point that the US military must use Portuguese for communication because the numeric value of Brazil's PI reinforces the recognition of that country's geostrategic importance, as already acknowledged by US and Canadian officials. The successful example of the Portuguese edition of *Air and Space Power Journal* in attracting the participation of Portuguese-speaking authors shows that a Portuguese communication channel favors the exchange of ideas and dissemination of knowledge among an audience whose geostrategic importance as a target for military institutional communication is guaranteed by the very high order of magnitude of Brazil's PI. □

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Offensive Airpower with Chinese Characteristics

Development, Capabilities, and Intentions

ERIK LIN-GREENBERG*

Editorial Abstract: Although China has traditionally employed its airpower in largely defensive air operations, this doctrine appears to be undergoing a significant shift. The author contends that China is developing limited capabilities in offensive airpower as a deterrent against its neighbors and American forces in the Pacific. Rather than implement a strategic airpower doctrine, China will develop “offensive airpower with Chinese characteristics,” a doctrine that uses traditionally tactical platforms to carry out strategic operations in China’s periphery.



ON THE 50th anniversary of the People’s Liberation Army Air Force (PLAAF) in November 1999, Chinese president Jiang Zemin announced that China would “strive to build a powerful, modernized People’s Air Force that

is capable of both attacking and defending.”¹ This marked a major shift in Chinese strategy. Since its establishment, the PLAAF intended its aircraft acquisitions, personnel training, and doctrine for defensive air operations.² To carry out the offensive operations described

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by Jiang Zemin, the PLAAF needed to modernize its aircraft inventory; revise strategic, operational, and tactical doctrine; and revamp training programs. In recent years, the Chinese military has undergone rapid modernization to develop air-warfare capabilities.

This article examines the PLAAF's air-warfare capabilities and explains the nature of offensive Chinese airpower. In recent years, the PLAAF has acquired new combat platforms and increased joint and combined training but has yet to develop strategic capabilities that allow it to strike targets outside the Pacific region.³ (According to Air Force Doctrine Document [AFDD] 1, *Air Force Basic Doctrine*, strategic operations consist of "offensive action[s] . . . that most directly achieve our national security objectives by affecting the adversary's leadership, conflict-sustaining resources, and strategy.")⁴ China's lack of such capabilities leads to questions about its intentions regarding the use of offensive airpower. The PLAAF's paucity of effective long-range offensive airpower stems from multiple factors, primarily insufficient offensive weapons systems, excessive command centralization, and China's inexperience in offensive air operations. Geopolitical factors have also limited that country's desire to develop more significant strategic capabilities.

Additionally, the article posits that China is developing limited offensive-airpower capabilities as a deterrent against actions by its neighbors and American forces in the Pacific. Rather than implement a doctrine of strategic airpower, China will develop "offensive airpower with Chinese characteristics," a doctrine that uses traditionally tactical platforms to carry out strategic operations in the country's periphery. The article begins by examining historical factors that contributed to the stagnation of the growth of offensive air warfare and then analyzes the PLAAF's development and possible intentions for its offensive air force. Lastly, it considers the implications that Chinese airpower has for the United States and the means by which the latter can counter its development in order to maintain regional stability in Asia.

History of the Development of Chinese Offensive Airpower

Certain events in the history of the PLAAF caused its modern capabilities in offensive air warfare to lag significantly behind those of other world powers. The incompatibility of offensive airpower with Mao Tse-tung's doctrine of "People's War" and the withdrawal of Soviet military aid in 1960 during the Sino-Soviet rift hampered the growth of strategic Chinese airpower by preventing the acquisition of new technologies and the development of a doctrine of offensive air warfare.

Prior to a series of doctrinal changes in the 1980s and 1990s, the People's Liberation Army (PLA), seeking guidance on confronting a more technologically advanced enemy, looked to Mao's concept of People's War. That concept would defend China from attack by using large numbers of troops armed with low-tech weapons to overwhelm an adversary through quantity rather than quality of personnel and weaponry.⁵ In such a war, the army, along with paramilitary forces, would work with the populace to engage in both conventional and guerrilla operations to overextend adversary forces. Once this occurred, conventional troops would attack and destroy isolated groups of enemy soldiers.⁶

The development of offensive airpower proved inherently incompatible with People's War. Since Mao based his war-fighting doctrine on defense of the Chinese mainland, the PLAAF primarily had responsibility for guarding the nation's airspace.⁷ From its formative years during the Korean War, the PLAAF armed and trained its personnel to fly air-superiority missions, focusing only limited attention on development of strategic capabilities. After suffering high casualties during its first bombing mission against a South Korean intelligence facility in November 1951, the PLAAF withdrew from regular service the bombers it had acquired to fly missions against targets in South Korea.⁸ After this incident, China focused on air superiority.

A nation hoping to effectively employ strategic airpower requires technologically ad-

vanced aircraft; command, control, intelligence, surveillance, and reconnaissance (C2ISR) systems; and significant pilot training, none of which conformed to the low-tech nature of People's War. PLA troops would overwhelm enemy forces using low-tech weapons—not high-tech systems such as strategic bombers. Thus, rather than develop modern weapons systems for long-range offensive missions, Mao's air force acquired Soviet tactical aircraft of Korean War vintage. The Soviet Union's military aid to China in the form of aircraft and training initially helped the fledgling PLAAF establish combat capabilities, but Chinese dependence on Soviet assistance limited the development of indigenous aircraft and doctrine. Soviet aid to the PLAAF began during the Korean War and continued until the Sino-Soviet rift in 1960. Termination of this material aid and the withdrawal of Soviet advisers left China with an antiquated air force and limited resources for modernization. The PLAAF supplemented and replaced Soviet-supplied aircraft with Chinese-produced copies. Through the 1970s, China's fleet included various platforms, including Chinese versions of the MiG-17 Fresco (J-5) and MiG-19 Farmer (J-6) interceptors as well as the Tu-16 Badger (H-6) intermediate-range bomber.⁹ Many H-6s remain in service today.

The PLAAF made no significant progress in developing aircraft capable of carrying out offensive air operations until the 1970s. Early in that decade, China attempted to develop an indigenous strategic bomber using British-made Rolls-Royce Spey turbofans.¹⁰ After abandoning this project due to technical and financial difficulties, the Chinese launched a program to reengine their H-6 bombers with the Rolls-Royce turbofans but cancelled this project as well for financial reasons.¹¹ Although China upgraded the avionics and electronic-countermeasures systems of its 1950s-era H-6 bombers, the PLAAF did not acquire a long-range strategic bomber capable of projecting airpower beyond the Chinese mainland during this period.¹² Concurrently, the United States developed the B-52 Stratofortress, B-1 Lancer, and F-111 Aardvark, all of which it has employed strategically. The low-tech nature of

People's War and China's reliance on the Soviet Union for military assistance ensured that China would build a fleet of antiquated aircraft rather than a modern air force capable of carrying out offensive operations.

China's Quest for Offensive Airpower

After an extended period of minimally developing equipment and doctrine, the PLAAF began to modernize rapidly. This process started in the early 1990s after the first Gulf War demonstrated that US airpower could easily defeat militaries based on the Soviet model, such as those of Iraq and China. The use of strategic airpower by the United States and its allies to strike leadership and military infrastructure in Iraq—and later in the Balkans—forced PLAAF analysts to recognize China's inability to defeat a modern military.¹³ To address deficiencies in waging a modern war, the PLA launched a revolution in military affairs to enhance capabilities by acquiring new equipment, improving command and control (C2) infrastructure, and increasing military training.¹⁴ A significant portion of this development focused on improving the offensive capabilities of the PLAAF.

Acquiring New Equipment

After a period of limited programs designed to develop indigenous aircraft, the PLAAF has increased its acquisition of both domestic and Russian aircraft. The procurement of advanced strike, refueling, and Airborne Warning and Control System (AWACS) aircraft represents the most visible component of China's air force modernization. Specifically, it has acquired advanced multirole combat aircraft, including the Russian Sukhoi Su-27 and Su-30, Chinese J-8 and J-10 fighters, Ilyushin transports, and indigenously produced AWACS platforms.¹⁵ These aircraft provide China with tactical air-to-air and air-to-ground capabilities, but the lack of a long-range bomber prevents it from projecting airpower beyond the Pacific.

The backbone of the current Chinese bomber fleet consists of approximately 120 H-6 intermediate-range bombers, supplemented by Q-5 and JH-7 fighter-bombers. The H-6, the largest of China's bombers, has a weapons payload of 20,000 pounds compared to the American B-52's 60,000. The operational range of the H-6 is also significantly smaller than that of the B-52, restricting the aircraft's operations to the Pacific. The Q-5 and JH-7 have even smaller payloads and ranges, limiting their reach to nations in China's periphery. In January 2007, Internet reports indicated that China had begun producing upgraded variants of the H-6 capable of carrying cruise missiles and precision-guided munitions up to 3,000 nautical miles.¹⁶ New H-6K aircraft enable China to operate further beyond its borders, but the lack of forward operating bases prevents it from projecting airpower globally.

A second component of China's equipment-modernization program involves the acquisition of aerial-refueling platforms. The PLAAF considers the ability to extend the range of its combat fleet critical to carrying out operations beyond the Chinese periphery.¹⁷ J-8 and J-7 fighters, which comprise most of the PLAAF fleet, have the range to reach potential conflict zones such as the Paracel and Macclesfield Islands, but without aerial refueling, they cannot loiter or engage adversary aircraft. Having too few forward operating bases also limits the PLAAF's ability to carry out long-range offensive operations. Unlike the United States, which can launch operations from strategically located air bases throughout the world, China has no major air bases outside its mainland. Without aerial refueling, China cannot carry out effective offensive operations, let alone adequately protect what that country considers its territorial airspace.

To address its need for aerial-refueling capabilities, China converted a few H-6 bombers into refueling aircraft in the 1990s and in 2005 ordered eight Russian Il-78 tankers.¹⁸ Although China's aerial refueling has improved, its effectiveness in an operational environment remains questionable. The PLAAF's and People's Liberation Army Navy Air Force's

(PLANAF) current refueling fleet represents only a small fraction of the 585 aerial tankers operated by the US Air Force.¹⁹ China's pilots also have limited air-refueling experience. Despite acquiring tankers nearly two decades ago, the PLAAF did not conduct overwater refueling until 2005.²⁰ Furthermore, because most of its combat aircraft cannot be aerially refueled, China needs an extensive upgrade program to remedy this deficiency.

Advancements in Command and Control

Operations that depend on the synergistic effect of aerial tankers, strike aircraft, tactical fighters, and other airborne platforms require significant coordination that can be achieved only through comprehensive and flexible C2. Current Chinese C2 relies on outdated communication systems, delaying the dissemination of orders and directives.²¹ Development of indigenous airborne C2ISR platforms such as the KJ-2000 and KJ-200 AWACS—a major component of improving C2 technology in the PLAAF—has enabled China to carry out airborne surveillance, C2, and battle management. The crash of a PLAAF KJ-200 during a test flight in June 2006 that killed all 40 people on board set back the Chinese AWACS program since the victims were key technical staff in designing and testing the KJ-200.²² Despite the mishap, China has continued to develop AWACS aircraft for operational use. Indeed, it is likely that the KJ-2000 has recently entered operational service with the PLAAF.²³

Although one can improve technology through the acquisition of modern equipment, the PLAAF will need time to alter its C2 philosophy. The Chinese military has not traditionally delegated authority to junior personnel, a situation that leads to a highly centralized C2 infrastructure in which senior officers make tactical decisions.²⁴ Thus, the PLAAF's intentions with regard to operating its new airborne C2 platforms remain unclear. Typically, junior- and midgrade officers serve as air-battle managers on most non-Chinese C2ISR platforms, but the PLAAF uses senior officers in control towers. To employ its airborne C2ISR technology effectively in offen-

sive operations, the PLAAF must first change its approach to command by delegating authority to junior personnel—something Chinese military leaders may prove reluctant to do.

Improved Training

In recent years, the PLAAF has revamped its training program to improve the quality of personnel and enhance combat effectiveness. It has established training exercises that allow Chinese pilots to fly realistic missions in a variety of flying conditions. Moreover, the PLAAF has introduced tactical training that focuses on potential combat confrontations with Taiwan and the United States, enabling pilots to practice both air-to-air and air-to-ground tactics designed to improve China's precision-strike capabilities.²⁵ During aggressor training (recently added), Chinese Su-27s and J-8s simulate the tactics of Taiwan's Mirage 2000 and F-16 fighters.²⁶

China has also increased joint and combined training to improve its ability to operate with foreign militaries outside the mainland. The Chinese integrated joint operations plan of 2002 led to an increase in the PLAAF's joint training.²⁷ Future military operations will likely include more joint operations, meaning that other components of the PLA—primarily the PLANAF—will support the PLAAF in carrying out offensive operations. A Sino-Russian exercise in 2005 emphasized the PLAAF's precision-attack capabilities, employing aerial tankers, bombers, tactical aircraft, and airborne forces.²⁸ An exercise held with the Tajik military in 2006 demonstrated China's airlift capabilities.²⁹ Both exercises reflect the country's ongoing attempts to improve offensive capabilities but also reveal the limitation of current capabilities to nations along China's periphery.

Offensive Airpower with Chinese Characteristics

China's pattern of aircraft acquisitions suggests that a doctrinal shift has occurred in the PLAAF. Following the first Gulf War, China's

unsuccessful attempt to purchase Tu-22 long-range bombers from the Russian government likely represented an effort to develop strategic aerial capabilities similar to those of the United States. Despite this failure, the Chinese continued to develop air-warfare capabilities through the 1990s. NATO air operations during Operation Allied Force in 1999 further influenced PLAAF modernization, reflected in the fact that Chinese strategists focused on the role of airpower and long-range strike in diminishing the use of ground forces.³⁰ Following the Balkan war, China accelerated its acquisition of platforms that the US Air Force had employed in Allied Force, such as multirole fighter aircraft and aerial tankers.³¹ This acquisition program continues today.

Although offensive airpower can be either tactical or strategic, the US government classifies China's quest for offensive airpower as strategic.³² The Department of Defense believes that PLAAF modernization will result in a Chinese air force with strategic capabilities, but China's current aircraft acquisition and development tell a different story. Most of the PLAAF's new Russian and indigenous aircraft are air-superiority fighters and fighter-bombers, both characteristic of tactical operations. Even with the support of C2 aircraft and tankers, the PLAAF's short-range tactical aircraft would have difficulty traveling far beyond the Chinese periphery. In 2005 Russia offered to sell China long-range Tu-22 and Tu-95 bombers, the same aircraft the Chinese attempted to obtain in the mid-1990s; however, China has yet to purchase those platforms.³³ China's decision to acquire short-range aircraft rather than strategic bombers indicates the current limitation of its airpower projection to the Pacific.

The acquisition of multirole fighters and AWACS aircraft, along with China's deficit in long-range strategic bombers, forces outsiders to question how Chinese military leaders define offensive airpower, which currently appears to combine tactical platforms with tactical and strategic doctrine—referred to in this article as offensive airpower with Chinese characteristics. This doctrine uses tactical multirole fighters to attack traditionally strategic targets, including C2, industrial, and leader-

ship infrastructure; additionally, they carry out tactical missions such as close air support and air superiority.

The nature of China's development of offensive airpower indicates that the country limits its view of potential threats to nations along its periphery and does not currently seek to project airpower beyond the region. Despite the restricted nature of its capabilities, China will likely continue to modernize its air force and may eventually develop global power projection.

Implications and Responses for the United States

The possibility of China's ever employing offensive air capabilities against its neighbors or American forces in the region remains questionable. The country's white paper on national defense of 2004 states that PLAAF doctrine has shifted from air defense to both defensive and offensive missions; it also indicates, however, that China adheres to a national policy of a defensive nature and "will never go for expansion."³⁴ Although this policy implies a mission of purely territorial defense, development of the PLAAF's offensive capabilities appears to contradict this assertion. Recently acquired platforms such as the H-6K, supported by AWACS aircraft and aerial refuelers, enable China to project its power regionally into hot spots such as Taiwan and the Spratly Islands, over which China and Vietnam clashed in 1988. If China is indeed committed to building a defensive military, offensive airpower with Chinese characteristics would find use only as a deterrent.

As part of its "peaceful rise," China ostensibly hopes to improve relations with other Pacific nations. Military conflict in the Pacific would impede trade in the region, hurting China's export-dependent economy. Japan and Taiwan, the nations that Chinese defense analysts consider the most threatening, are among China's top trade partners.³⁵ Relying on exports and foreign investment for domestic modernization, the Chinese probably would not attack their neighbors since a war instigated by Beijing

could result in sanctions and jeopardize foreign investment, thereby devastating China's growing economy.³⁶ In addition to causing economic harm, an unprovoked attack on Taiwan or other key US regional allies could possibly lead to an American-led military response. The potential economic harm and military repercussions of such conflict have led Beijing to rely on diplomacy rather than force. In recent years, China has increased cooperation with regional economic and security organizations such as the Association of South East Asian Nations. In 2002 the Chinese demonstrated their commitment to diplomacy by signing the Declaration on the Conduct of Parties in the South China Sea, a document intended to prevent conflict over the Spratly Islands and other disputed islands.³⁷

Even though the likelihood of China's initiating a war in the Pacific region remains small, offensive development of the PLAAF still poses a threat to regional stability. The ability of China to project military power throughout the Pacific jeopardizes American influence in the region. The United States has maintained military dominance in the Pacific since the end of World War II, but recent Chinese military development has the potential to shift the balance of power there. Even with China's promise of a peaceful rise, its acquisition of platforms such as the J-10 and Su-27 fighters may lead the PLAAF to become a regional, technological peer competitor to the United States and other Pacific nations. Chinese militarization may lead neighboring states such as Japan and Korea, which recently expressed concern over the lack of transparency in China's military buildup, to develop more aggressive military postures.³⁸ China might respond by increasing its own military capabilities, resulting in a spiral process that could lead to intense diplomatic or military confrontations.³⁹ It might also use airpower to project power to Central Asian states, such as Kazakhstan, that supply China's burgeoning energy demand.⁴⁰ Any form of PLAAF involvement in these nations could produce tension with the United States and Russia, both of which wish to gain influence in the geostrategically important region.⁴¹

To maintain the current balance of power in the Pacific, the United States must limit the PLAAF's ability to wage offensive air operations. Adm Dennis C. Blair, former commander of US Pacific Command, declared, "We respect the authority of the People's Liberation Army in their mainland. Yet we must make them understand that the ocean and sky [are] ours."⁴² The Chinese have an inherent right to defend their sovereignty, but the United States must work with its global allies to limit the development of China's offensive air capabilities.

Limiting the Transfer of Military Technology

China depends heavily on foreign nations for the PLAAF's modernization, looking to Russia, Israel, France, and Germany for the preponderance of its military technology. Outsourcing the development of the Chinese air force to foreign nations allows the United States to influence many of China's weapons suppliers through incentives or punitive measures. Legally, the United States can block the transfer of weapons systems containing American technology. In recent years, however, it has even stopped the sale of advanced military hardware that does not contain American equipment.

The fact that Israel, China's second-largest supplier, relies heavily on US military aid gives the United States significant leverage over Israel's program of weapons sales. In 2000 pressure from the United States prevented Israel from selling its Phalcon AWACS to China. The Israeli cancellation, which followed a US threat to withhold \$2.8 billion in military aid, delayed the introduction of an AWACS platform into the PLAAF until 2006.⁴³ In late 2004, Israel attempted to upgrade spare parts for Harpy unmanned aircraft, which Israel Aircraft Industries had sold to China in 1994. Although Israel did not send the upgraded parts to China, the United States froze Israeli participation in the US-led development of the F-35 Joint Strike Fighter due to security concerns—a decision in line with recommendations made by the US-China Commission in 2004.⁴⁴ The commission suggested that Con-

gress restrict foreign defense contractors who sell military-use technology to China from participating in research and development by the US defense community.

The commission also urged Congress to press for continuation of the European Union's (EU) arms embargo on China, believing that lifting the embargo, imposed after the Tiananmen Square Massacre of 1989, would accelerate modernization of the PLA.⁴⁵ Even with the embargo in place, EU sales of military equipment to China increased from 54 million euros in 2001 to 416 million in 2003.⁴⁶ Equipment sold to the Chinese military includes British-manufactured propellers used on the Chinese Y-8 Airborne Early Warning System, Italian Aspide air-to-air missiles, components of the French AS-365 Dauphin military helicopters, and advanced British and Italian avionics for the F-7 fighter aircraft.⁴⁷ The export of military technology to China continues despite the embargo because the EU left interpretation and enforcement of that action to member states.⁴⁸ Although some EU nations prohibit the sale of all military items to China, others, such as the United Kingdom, limit their embargoes to lethal weapons and military equipment that could be used for internal repression; those countries continue to export nonlethal military technology, such as avionics, radars, and aircraft-propulsion systems.⁴⁹

To limit the development of China's offensive capabilities, the United States must continue to pressure the EU to continue its ban on weapons sales. In addition, it should urge EU nations to standardize the guidelines regarding technologies that can be sold to China. States that abide by these guidelines and halt the transfer of military technology to China should receive incentives such as military aid and the right to participate in US-led joint weapons-development programs (e.g., the Joint Strike Fighter project). States that choose to continue to sell advanced military hardware to China should face restrictions similar to those imposed on Israel in 2004.

Limited Engagement

To discourage the offensive development of the PLAAF, the United States must couple military deterrence and embargoes with limited cooperation with the Chinese military. Some Americans fear that cooperatively engaging with China's armed forces would allow the Chinese to learn doctrine and tactics that could improve their ability to wage war against the United States.⁵⁰ Although these concerns are justified, engagement promotes greater transparency in military affairs, improves mutual understanding between the United States and China, and helps establish lines of communication among senior leaders that can reduce the possibility of accidents between US and Chinese forces.⁵¹

Primarily, the US Navy has carried out current US military engagement with China. That service has successfully monopolized recent Sino-US engagement efforts because a Navy admiral traditionally heads US Pacific Command and because naval forces conduct a significant portion of US military operations in the region. Developing ties between naval forces remains important, but the Chinese consider both the navy and the air force priorities in PLA modernization. Given China's emphasis on strengthening its air force, the US Air Force should play a role equal to that of the Navy in engaging the Chinese military. Interaction between the US Air Force and the PLAAF should avoid exposing US military capabilities in areas such as force projection and C2ISR operations. Instead, it should focus on conducting professional exchanges and developing capabilities that enable China and the United States to respond collectively to regional humanitarian and security issues.

Promoting transparency and mutual understanding between the PLAAF's and US Air Force's leadership is fundamental to building trust between China and the United States. High-level meetings between senior officers and defense ministers can further this objective, provide an environment where senior leaders can establish lines of communications to reduce chances of misunderstanding in the event of a crisis, and plan future exercises as

well as professional-development exchanges, the latter allowing personnel from both the PLAAF and US Air Force to learn about the other's operations and leadership systems. The US Air Force should invite PLAAF personnel to participate in professional military education programs at all levels, on the condition that China reciprocate by providing Americans similar access to PLAAF training programs. Bilateral exchanges should occur throughout the spectrum of leadership, from enlisted schools and officer accession programs through senior education institutions such as the National Defense University. These programs allow for the direct interaction of military personnel without political interference. Direct military-exchange programs at all levels contribute to mutual trust and understanding.⁵²

Recognizing China as a critical global actor, the United States is encouraging that nation to act as an international stakeholder.⁵³ The US Air Force can help China achieve this status through combined training in humanitarian relief. Since its creation, the US Air Force has provided airlift support to relief operations following disasters. These missions offer vital assistance and improve the image of the nation that carries them out.⁵⁴ The US Air Force should initiate exercises with the PLAAF that allow Chinese and American airmen to work together while responding to simulated large-scale humanitarian crises. This direct interaction will increase mutual understanding and respect between the air forces and may encourage China to participate as a responsible actor in the Pacific region. A Chinese decision to employ military aircraft in humanitarian operations would increase the legitimacy of China's peaceful rise.

Critics may argue that combined exercises will strengthen China's military capabilities by increasing the PLAAF's ability to deploy personnel and equipment rapidly. The PLAAF already possesses airlift capabilities, as demonstrated by recent Sino-Tajik and Sino-Russian military exercises. Instead of providing the Chinese with additional military capabilities, combined relief exercises with the United States would serve as a catalyst for China to

play a more active role in assisting its neighbors during humanitarian crises. The increased transparency and understanding that will result from interaction between American and Chinese airmen greatly outweigh the minimal national-security risks of limited combined training with the PLAAF.

Combined training should be supplemented by high-visibility exchanges such as participation of the US Air Force's aerial-demonstration teams in Chinese air shows. The Thunderbirds, which performed in Beijing in September 1987, continue to appear in numerous international air shows.⁵⁵ Prominent events such as air shows and port visits by naval vessels demonstrate to both the Chinese and American publics the enhanced relationship between the two militaries without revealing advanced capabilities. All instances of the US Air Force and the PLAAF's working together should be publicized in both the United States and China to demonstrate increasing cooperation and friendship between the two countries.

Military Readiness

China ostensibly seeks to avoid using offensive military force, but the element of surprise remains a pillar of Chinese doctrine.⁵⁶ Thus, the US military must prepare itself to respond to any offensive action taken by China. The US Air Force currently forward-deploys B-1, B-2, and B-52 bombers to Andersen AFB in Guam, 1,800 miles southeast of China. These aircraft, along with others in Japan, Korea, and Hawaii, serve as a powerful deterrent to offensive action by the Chinese.

In addition to deploying advanced aircraft to the Pacific, the United States must maintain a qualitative advantage over Chinese weapons systems and doctrine. Although US Air Force equipment currently is technologically superior to that of the PLAAF, recent modernization of Chinese equipment may lead the PLAAF to become a peer competitor to its US counterpart. Thus, the US Air Force must develop tactics that enable effective employment of its weapons against China in a potential conflict. Chinese military leaders

question the effectiveness of current American tactics because, since the end of the Cold War, the United States has lacked a peer competitor to guide the development of tactics. Lt Gen Liu Yazhou of the PLAAF described the US Air Force's tactical development as "crossing a river by feeling the stones in it," referring to a phrase coined by Chinese leader Deng Xiaoping that describes modernization through cautious experimentation.⁵⁷ Yazhou may have a valid point about US Air Force tactics, given that its aggressor training is still largely based on fighting the no-longer-extant Soviet Air Force.⁵⁸ To ensure continued military superiority in the Pacific, the United States must couple the acquisition of new war-fighting platforms with tactical development that prepares American forces for a potential military conflict with China.

Conclusion

The PLAAF's increasing offensive capabilities, combined with the uncertainty of China's military intentions, create a potential threat to the United States and its regional allies. After an extended period of stagnation in the development of offensive airpower, the PLAAF has entered a period of rapid modernization that includes the acquisition of platforms such as Su-27 and J-10 fighters, modernized H-6 bombers, aerial-refueling aircraft, and AWACS platforms. It could use these systems to carry out both strategic and tactical missions in a manner this article has referred to as offensive airpower with Chinese characteristics.

Although China's offensive capabilities are currently limited to regional operations, the PLAAF likely will attempt to develop global strategic capabilities. The acquisition of platforms such as aerial tankers and the upgraded H-6 bomber suggests that China hopes to increase its long-range offensive capabilities. A key component of such development would involve acquisition of a long-range bomber. Development of such an aircraft may find help in China's growing aviation industry, which hopes to produce a large commercial jet by 2020.⁵⁹ Since technology and research from

the civilian project could be applied to developing a long-range bomber, production of an indigenous bomber would likely begin in the same time frame as its civilian counterpart. Refining aerial refueling and C2 today may become part of a larger plan to strengthen the support infrastructure required for long-range projection of airpower in the future.

Even if used only as a strategic deterrent, China's ability to project airpower globally in the form of long-range bombers capable of striking North America would pose a significant threat to the United States. Increased power-projection capabilities could also enhance China's influence in geostrategically important regions of the world such as Africa

and Latin America, where China has a growing interest. Because future intentions of the Chinese military remain largely unknown, the United States must limit China's offensive development and encourage development of a responsible Chinese air force by restricting the PLAAF's access to offensive weapons systems while promoting mutual understanding between the US Air Force and the PLAAF through bilateral engagement. Given China's potential to change the balance of global airpower, the United States must act decisively to limit and contain China's offensive-airpower capabilities before the PLAAF can project airpower globally. □

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A Rescue Force for the World

Adapting Airpower to the Realities of the Long War

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Editorial Abstract: Despite an unquestionable abundance of talent and capabilities, the Air Force rescue community has long been plagued by organizational instability, an unclear purpose, and a significant amount of both internal and external professional frustration. The authors advocate redefining the community's core thinking and missions to promote what it does best—fostering stability, economic growth, and freedom in locations beset with isolation and hopelessness—as solutions to these problems.



THE QUADRENNIAL DEFENSE *Review Report* begins with a simple statement: “The United States is a nation engaged in what will be a long war.”¹ With that understated introduction to the lexicon, the contest known as the long war is now prompting significant change across every instrument of national power. That is especially true within the Department of Defense (DOD), and the Air Force rescue community is not immune.

As Air Force rescue assesses its ability to contribute to the nation's efforts in the long war, one should note that people have debated the question of its overall relevance for many

years. Over time, the rescue community has wandered down several paths that it hoped would demonstrate a military utility that matches its substantial capabilities, but none have led to lasting success—the endurance of the debate offers proof enough of that. One could describe the options pursued (simultaneously) by the community as “too limited” (restricting rescue forces solely to support the air component), “too broad” (literally claiming a doctrinal responsibility to rescue anyone, anywhere in the world, and at any time), or “too much” (attempting to demonstrate offensive and special-operations capabilities and, in so doing, pushing the imperatives of recov-

ering air-component personnel to the periphery of its focus). This has resulted in organizational instability, a sustained lack of clarity of purpose, and a significant amount of professional frustration within and about Air Force rescue. To be sure, the community has an abundance of talent and raw capabilities. But rescue has lacked a vision for the future that not only remains true to its Air Force origins and doctrinal responsibilities but also provides venues to continually exploit its unique capabilities.

The potential for that sort of future exists, but rescue will need to change its thinking in order to achieve it. Instead of trying to be something it is not, rescue should focus on what it does best and apply those capabilities to the long war's most pressing requirement—winning the global ideological conflict between the isolation and sense of helplessness that breed terrorism on the one hand and a vision of shared interests and interdependency that fosters stability, economic growth, and freedom on the other. The benevolent core of the Air Force's rescue mission has direct relevance to the hearts-and-minds contest that will ultimately determine the long war's outcome. Success in that contest lies at the very center of US strategy for defeating global jihadism, and, between periods of peak demand for its conventional wartime mission, rescue's capabilities can make a significant, airpower-centered Air Force contribution to that success.

The rescue community should build a brighter, more stable future for itself by maintaining conventional air-component combat search and rescue (CSAR) capabilities as its first priority. Subordinate only to that, rescue should exploit its unique abilities by initiating and maintaining a program for a continuous series of targeted, highly visible engagements designed to deliver life, health, and goodwill to remote but strategically important locations around the world. It should strive to establish itself as something unique within the DOD—a globally capable enterprise recognized for its expeditionary use of airpower to conduct “white hat” engagements and known world-

wide for its compassionate acts. In short, it should become a rescue force for the world.

With a unity of purpose defined in those terms, rescue can create strategic-level effects that it never could have attained via the well-worn paths it has trod for the last 15 years. The remainder of this article substantiates those points, describes what the Air Force's rescue force could become, and explains why that is important to the Air Force's rescue community, the service itself, and victory in the long war.

Groping for a Vision

After a little more than 15 years of work, the Air Force should feel satisfied with the CSAR capability that it has built. Starting from almost nothing in 1989, it activated multiple squadrons and associated support organizations in the continental United States (CONUS) and around the world, fielded about 100 HH-60G Pave Hawk helicopters, organized effective staffs, modernized employment concepts that had remained unchanged since Vietnam, built an improved capability for HC-130s, fostered development of pararescue capabilities by categorizing and managing them as a weapon system, and much more. The steady stream of improvements continued even as the rescue community endured the programmatic and leadership turmoil caused by five changes in major-command ownership since 1989. One should also note that all of this occurred while the Air Force's small community of rescue professionals maintained a forward-deployed presence in Southwest Asia that has stood watch over the lives and safety of every service's war fighters in that region during every hour of every day since 1993.

Despite those (and many more) significant achievements, Air Force rescue continues to grope for a defining purpose—one that matches its capabilities and is larger than simply sitting alert in anticipation of a fighter pilot having a bad day. When combined with the absence of a long-term vision for rescue within the community, the search for greater venues for performance manifests itself in a myriad of intra-

community conflicts that defy consensus and resolution. Most of those conflicts involve pursuit of some new capability offered without context for how or why it would fit in with the rest. Without such context, the capability itself becomes the vision. The eventual arrival of replacements for the HH-60G and HC-130 will only compound the problem since their improved capabilities will simply trigger a flurry of new initiatives designed to “get rescue to the fight.” But they will emerge, as before, without some goal in mind. Which fight? When? For what strategic purpose? Those basic questions do not receive the thoughtful analysis they deserve. Instead, the pursuit of more military relevancy continues in 100 different directions.

Within that persistent, conceptual haze, rescue has produced an entire generation of operators for whom the very concept of Air Force rescue has no intellectual underpinning and no common theoretical reference point. Without that, there can be no articulation of a path toward some coherent goal that will provide an enduring benefit to the Air Force and DOD—and no way for rescue professionals to envision a future worth creating.

Containing Disconnectedness

Of course, one must contemplate any future for Air Force rescue in context of the long war, and that reality makes a proper understanding of the nature of the conflict centrally important. Fortunately, the West’s understanding of the origins of terrorism has improved significantly since 11 September 2001. Although a detailed discussion of that subject lies well beyond the scope of this article, we now recognize that terrorism is primarily rooted in climates of intractable political alienation, injustice, and perceived helplessness.² In that context, the *National Strategy for Combating Terrorism* makes the important acknowledgment that “the War on Terror is a different kind of war.”³ As described in the *National Security Strategy of the United States of America*, the primary difference is that “in the short run, the fight involves using military

force. . . . In the long run, winning the war on terror means winning the battle of ideas.”⁴ This daunting challenge will require the creatively applied effects of every instrument of our national power if we wish to succeed.

Winning that ideological battle—the contest for hearts and minds—will mean routine and frequent engagement in the weak and failing states that stretch from North Africa to the Philippines and from Central Asia to Central Africa, as well as in the world’s ungoverned spaces such as the vast Sahel in Africa.⁵ They are “regions plagued by politically repressive regimes, widespread poverty and disease, routine mass murder, and—most important—the chronic conflicts that incubate the next generation of global terrorists.”⁶ Strategist Thomas Barnett collectively describes these regions as “the least connected to the global economy [representing] . . . the limits of the spread of globalization . . . where the connectivity of the global economy ha[s]n’t generated stability, and development, and growth, and peace, and clear rule sets, and democracies. This is where the disconnected people are, and on that basis—no surprise—that’s where the terrorists come from.”⁷

Barnett calls the combined space occupied by those regions the “non-integrat[ed] gap” (a convenient term that we shall adopt here for its brevity), and he categorizes the enemy we face there in a nontraditional way. Instead of targeting a bloc of hostile nations, rogue nation-states, or even individual rogue leaders, we should recognize our enemy for what it really is—the “disconnectedness” that defines the gap.⁸ Barnett is not out on an intellectual limb; this condition is the very basis for much of our current national-security strategy. So in that context, a simple metric becomes available for basic assessment of any action we contemplate taking inside the gap (military or otherwise): will it tend to decrease disconnectedness? Certainly, we will sometimes require a range of forceful military actions to create the necessary conditions, but decreasing disconnectedness really means winning the ideological battle, which, in turn, means success in the long war. Granted, conventional military action is an important part of that huge effort,

but from a strategic point of view, kinetic operations are only a trailing indicator that preventive engagement efforts have failed. Instead, military force will frequently represent a necessary step *backward* that we will occasionally take in order to move the next necessary two steps forward.

That concept is neither new nor controversial. The terms *humanitarian civic assistance*, *civil affairs*, *theater security cooperation*, *capacity building*, and *foreign internal defense* (FID) all refer to established DOD efforts expressly designed to reduce disconnectedness by forging stronger ties, promoting human rights, improving the image of the United States and the West, increasing stability, and setting conditions that will permit flows of foreign direct investment. The DOD does those things all over the world, every day. In strategic terms, the struggle to build connectivity with failing states represents the *real* central front in the long war. *If we wish to find an enduring future for rescue, we will find it there—in the gap, helping our nation and the Western world win the ideological battle.*

A Rescue Force for the World

The most direct and useful advice for rescue professionals who make decisions to shape their future would urge them to do what they do best. If an Air Force rescue wing can do anything, it can deploy to austere, remote locations in order to provide hope to desperate people who need it. That's what rescue does when it recovers a fighter pilot, and that's what the community should focus on in a big way during the long war. Rescue should use its capabilities and inherently compassionate mission as both a ticket into the gap and as a non-lethal, even antilethal, weapon in the long war's ideological-political struggle.

With leadership, unity of purpose, and persistence, Air Force rescue could vault itself from its position as tactical-level support player hovering at the periphery of conventional combat operations into a high-visibility position of strategic relevance during the greatest conflict of this generation. It could transform itself into a rescue force for the world. To

reach that point, the community must focus on several initiatives.

Maintain Robust Capabilities for Conventional Combat Search and Rescue

Most importantly, rescue must maintain and continually improve its ability to assist isolated personnel in the deep operational environment, and CSAR's mission needs should continue to drive the major acquisition and training efforts of the community.⁹ Nothing else is possible if this part of the contract with the Air Force lapses. True, keeping this task at the center of rescue's consciousness invites accusations that the community is a "one trick pony," capable only of rescuing downed fighter pilots. Those who denigrate that noble mission in such a way are not simply wrong—they fail to comprehend several facts about it.

First, it is a moral duty. Leadership at all levels supports the premise that we have an obligation to war fighters to "bring everybody home." Adm Edmund Giambastiani, vice-chairman of the Joint Chiefs of Staff, describes the reciprocity of that compact when he refers to "the power of a force multiplier as we send our young people into harm's way with the promise that we will not leave them behind."¹⁰ The moral obligation strengthens when one considers that the weight of operational failure during CSAR shifts primarily to those in the worst position to bear it—the people who need rescuing.

Second, CSAR reduces strategic-level risk. By ensuring that rescue forces can reach any part of the operational environment, effective CSAR counters the enemy's ability to transform a tactical-level incident into an event with strategic consequences. Our enemies realize the importance of possessing a captive, and they know that one captive and 30 seconds of video give them a worldwide audience. That scenario not only hurts US efforts by putting pressure on our strategic objectives and by creating significant operational and public-affairs challenges, but also helps the enemy by creating legitimacy, publicity, help in recruiting, and a boost to his financing.

Third, success in that mission means capability for success in many others. The training and integration required to do conventional CSAR create the flexibility that rescue forces use to succeed at a myriad of other types of missions. The classic CSAR mission to recover a downed pilot fuses such capabilities as real-time intelligence analysis and sensor fusion, time-sensitive targeting, net-centric data management, interagency coordination, close air support (CAS) by fixed- and rotary-wing aircraft, ad hoc air refueling, terminal area control, small-team tactics, and battlefield medicine, all at a time and place of the enemy's choosing. For proof that conventional CSAR training produces the most capable force possible, we need only examine the results of major combat actions during Operation Iraqi Freedom. During those operations, launched from austere, self-supported locations, more than two-thirds of the personnel recovered by Air Force rescue forces came from another component—an outcome made possible because rescue crews had received the best training available.

Fourth, it reduces operational-level risk across the board. If rescue forces are properly organized, trained, and equipped, their response to an isolating event will be neither too small to be effective nor so large that it adversely affects the overall air war. Needlessly retasking the role of a CAS or sensor platform to support a CSAR mission will cause someone to suffer. How will it affect the soldiers and marines who rely on that support for their own effectiveness and survivability? What happens to the high-value target at the receiving end of that package's precision-guided munitions? The presence of a dedicated, professional rescue force and well-rehearsed CSAR command-and-control decision making helps prevent those kinds of mistakes. Further, during a properly executed CSAR mission, supporting assets are at risk only as long as necessary, preventing needless exposure to the enemy and facilitating regeneration of the tasked capabilities.

Last, one finds the weightiest benefit of a robust CSAR capability in the immeasurable effect on operations yet to be planned and

conducted. If the Air Force doesn't focus on recovering its own, how will our senior military leadership change its thinking about acceptable risk? If we allow that capability to atrophy, what other missions won't take place? What possibilities will we fail to exploit because the people carrying out the operation would find themselves at risk with no device to mitigate it? How would those decisions affect the decisions and operations of the other services? What effect would they have on the decisions of policy makers?¹¹

All of the capability and flexibility that put those questions to rest comes from building a force focused on the demanding needs of the air component. Ultimately, when the Air Force builds its one-trick-pony capability to recover downed pilots, it isn't building a chow hall that serves only Air Force people—it is building a set of the most flexible, versatile, and useful capabilities on the battlefield. Building and maintaining robust conventional CSAR capabilities benefits the entire joint force.

Go to the Gap

While maintaining its robust capability to support the air component, rescue should seize every opportunity to exploit its existing capabilities inside the gap as an explicitly white-hat rescue force. After air-component requirements, operations inside the gap should become the central organizing principle of the rescue community. The specific objectives of those operations should call for supporting theater programs designed to forge connectivity between the West and the gap, using rescue's unique brand of airpower and broad array of operational and life-saving skills to benefit its inhabitants in a memorable way, and strengthening the depth and breadth of experience of an inherently expeditionary rescue force. Missions undertaken for those purposes will motivate and inspire the rescue community and demonstrate genuine relevance in the long war. Not least, it will help the Air Force by providing what it seeks—a highly visible representation of the best that airpower has to offer. This is not merely a parochial interest of either the rescue community or Air

Force. Instead, it goes to the very core of US strategy for defeating terrorism. Former secretary of defense Donald Rumsfeld put it succinctly when he said, "Extremists know that war and anarchy are their friends—peace and order their enemies. . . . We cannot allow the world to forget that America, though imperfect, is a force for good in the world."¹²

Before any of that can happen, the rescue community and, in turn, the Air Force need to recognize those types of missions as legitimate contributions to the strategic efforts of the nation. Without that realization, Air Force rescue will remain stuck in place. With it, that community can become a frontline force for beating the enemy's strategy instead of the enemy's army, thereby contributing to the rarest and most sublime kind of military victory.

Disaster Response. The most obvious scenario for employment inside the gap would occur during some sort of natural or humanitarian disaster. If Air Force rescue performs well and consistently, it would soon become every theater's 911 force during those types of crises. Starvation in Ethiopia, floods in Bangladesh, noncombatant evacuation operations in Chad, or earthquake in Iran? Send Air Force rescue. Other services can and will continue to contribute their own unique capabilities to those types of events, and this article certainly does not propose that Air Force rescue would (or should) provide the largest or most persistent force. In many cases, however, an expeditionary Air Force rescue unit may be the first DOD force to arrive on scene and, by exploiting capabilities inherent in its organic airpower, initiate operations in locations or under conditions that other services may find prohibitive.¹³ Participation in those operations would put an unmistakable Air Force presence at ground zero. Over time, rescue's inherent capabilities to rapidly assess changing and chaotic situations, establish order, perform effective command and control, and save lives will be widely recognized by the regional combatant commands and (more importantly) by populations at risk around the world.

Those types of large-scale requirements are rare, and even now, at a time when the rescue community must endure a particularly high

operations tempo in support of operations in Iraq and Afghanistan, plenty of enthusiastic volunteers would go on the road to participate. That was certainly the case when, in March 2000, an HH-60G squadron on its way home from a deployment to Operation Northern Watch in Turkey was rerouted to Mozambique to provide humanitarian assistance after ruinous floods ravaged the country, isolating hundreds of thousands of people. Upon arrival, squadron members flew 240 missions in 17 days and delivered more than 160 tons of humanitarian-relief supplies in an effort still viewed as a significant accomplishment within the HH-60G community.¹⁴

No one should doubt the effectiveness of humanitarian operations in the long war's ideological contest. The response to US humanitarian efforts after the devastating tsunami struck Indonesia in 2004, described by Adm Mike Mullen, chief of naval operations, provides an illuminating example:

I was struck by the results of a nationwide poll conducted two months [after the relief effort]. . . . The poll found that, as a direct result of our humanitarian assistance—and for the first time ever in a Muslim nation—more people favored U.S.-led efforts to fight terrorism than opposed them (40% to 36%). Perhaps more critically, the poll also found that those who opposed U.S. efforts in the war on terror declined by half, from 72% in 2003 to just 36% in 2005. According to the group Terror Free Tomorrow, who commissioned the poll, it was a "stunning turnaround of public opinion" and demonstrates that "U.S. actions can make a significant and immediate difference in eroding the support base for global terrorists."¹⁵

One detects an implied caution in those results, however. A population ruined by a natural disaster or some other humanitarian crisis will long remember any failure of the United States to respond if it perceives that America had the capacity to do so. Participation in those operations comes with an opportunity cost, but the price of inaction may prove far greater. The world has expectations.

Keep in mind, too, that the enemy also gets a vote in the outcome. On 8 October 2005, a 7.6-magnitude earthquake rocked the Kashmir

region, killing 73,000 people and leaving 3 million more homeless. The *London Daily Telegraph* reported from Islamabad that “immediately after the earthquake, the best organised aid relief came from groups such as Pakistan’s main radical Islamic party, Jamaat i-Islami, which previously backed the Taliban government of neighbouring Afghanistan. . . . Several Islamist groups have been praised by normally hostile sectors of the Pakistani media for providing aid relief.”¹⁶

US response to the earthquake was late but not fruitless, and the Pakistanis took note. According to Pakistani doctor Muhammad Farid, “‘It has changed our opinion about the United States. . . . Anti-American Muslim clerics were wrong about the American relief workers. . . . They have been accusing all these people of spreading immorality, but these are the people who came to save our lives.’”¹⁷ In November of that year, Pakistani newspaper editor Najam Sethi told reporters that the United States “‘has had a better profile in Pakistan in the last few weeks than in the last 15 years.’”¹⁸ In the words of Admiral Mullen, “these good deeds go far further in delivering the ‘peace and prosperity’ message than any cruise missile ever could.” We were effective inside the gap when “we started showing them a side of American power that wasn’t perceived as frightening, monolithic, or arrogant.”¹⁹ That is what rescue can bring to the table on behalf of the Air Force.

Other Engagement Missions. Although easy to visualize, major disasters and humanitarian-relief events are rare, and we should not consider them the mainstay of an “into the gap” strategy for Air Force rescue. The real benefit will come from repeated, consistent, and short-duration deployments into target countries. Specifically, the core of rescue’s engagement activity will come from preplanned deployments in support of combatant commanders’ theater security-cooperation strategies, designed to achieve predefined objectives. Those objectives should exploit rescue’s greatest strength—its ability to deploy to austere, remote locations to provide hope to desperate people who need it. What would that look like? For starters, rescue personnel can go to Africa,

Central America, or Southeast Asia and set up a clinic; pararescuemen can get hands-on experience; and a unit can bring its flight surgeon as well as other medical professionals and stay for a couple of weeks. People who have never seen a doctor in their lives can get a wound treated or a checkup or some simple antibiotics.²⁰ And this should not occur just once—but again and again and again.

Those types of efforts in humanitarian civic assistance comprise just one of a host of missions that could serve as the basis for repeated deployments. Unlike the fairly rare occurrence of disaster-relief efforts, combatant commands offer a wide variety of theater-engagement opportunities as part of their theater security-cooperation plans.²¹ Some opportunities, such as deployments for training (DFT), are not primarily humanitarian in nature. A DFT seeks to facilitate training of the deployed unit, but interaction with the host-nation military is inevitable, allowing the United States to engage in direct military-to-military interaction. Because turboprop aircraft and helicopters are common to air forces of gap countries, DFT requests are dominated by interest in deployment of Air Force rescue units. During those visits, the host-nation military sees the professionalism of US forces firsthand and becomes comfortable working with Americans. They also provide an opportunity for the United States to emphasize important concepts such as respect for human rights and civilian control of the military.

The variety of available missions ensures plenty of opportunity to turn a gap-focused strategy into action. Those occasions will continue to expand since the inherently humanitarian and nonthreatening nature of rescue operations will enable rescue to go where no other Air Force unit can go. For example, after the dissolution of the Soviet Union, a rescue exercise involving US and former Soviet states became one of the first tools used to promote direct military-to-military engagement.²² Rescue also served as a tool for engagement with China. Reflecting on those encounters, Gen Paul Hester, Pacific Air Forces commander, said that he’s “still looking for ways . . . for people to come together in a non-

threatening way for other nations to do business together.”²³

Why Foreign Internal Defense Is Different.

Some individuals may perceive that the course described for rescue is already occurring via the FID mission of the Air Force’s 6th Special Operations Squadron. FID has a specific meaning, and this squadron exists for a specific purpose—“to assess, train, advise and assist foreign aviation forces in airpower employment, sustainment and force integration.”²⁴ Although it could serve as an outsourced provider of FID activity if tasked, rescue’s best contributions to the ideological contest will come from doing what it does best—helping people. Further, rescue’s ability to go practically anywhere (including countries that do not have an air force) provides an engagement capability when US interests or relations in such countries are not strong enough to establish a FID program.

However, Air Force rescue professionals who set out to organize an expeditionary, gap-centered strategy for their community would do well to note how Air Force Special Operations Command trains its FID personnel and the methods used to organize its engagements. Through years of experience, 6th Special Operations Squadron has defined a template for success that rescue can adapt for its own purposes. Above all, that unit has established an education and training program designed to maximize the effectiveness of its cadre.²⁵ Informed by the FID experience, rescue professionals should create their own curriculum for professional development that augments conventional CSAR training. Language and cultural-awareness training are important starting points, but much remains. For example, the following areas need attention: learning how United Nations (UN) humanitarian or peace-enforcement operations are organized, participating in the UN’s International Search and Rescue Advisory Group, providing advice to US Pacific Command’s Multinational Planning Augmentation Team or the DOD’s Center for Complex Operations, striving to reduce concerns that some nongovernmental organizations may have about working with the US military, learning the unique support requirements of the Red Cross, or figuring out how to

communicate with and support the US Agency for International Development, embassies, Doctors without Borders, and many others. These new challenges are abundant and growing. The DOD needs more capacity to help solve them, and the Air Force would like to highlight airpower’s ability to do that kind of work.

We can accomplish none of the preceding in a vacuum. Rescue’s efforts need to become a carefully coordinated part of existing theater-engagement strategies, and each operation must be meticulously planned. We will need time to turn concepts into actionable plans, learn security-cooperation processes, and establish relationships with combatant-command staffs and DOD security-cooperation agencies. We have much work to do, and leaders at all levels need to emphasize its importance to the rescue community, the Air Force, and the nation. If executed properly and managed well, rescue’s efforts inside the gap could become the stuff of legend—representing a force that generates respect, appreciation, and influence among populations with widely disparate backgrounds. Done right, Air Force rescue could become an entity with an image that transcends the DOD, and one can envision the day when even nations hostile to the United States would welcome the arrival of the guardian angels of the US Air Force into their airspace.

A Glimpse into the Future

Imagine a future in which Air Force rescue shares its existential focus on robust CSAR capabilities with beneficent engagement inside the gap so that both concepts drive the evolution of training, organization, and operations in the rescue community. Imagine, as a result, the transformation of the Air Force’s one-trick pony into a world-renowned humanitarian force filled with multilingual regional experts who have operated all over the world in support of every imaginable type of contingency operation—a force experienced in working with every conceivable flavor of government and nongovernmental agency as it extends its

long track record of audacious, high-visibility, white-hat assistance to desperate and appreciative people. Envision that force based not in two CONUS supersquadrons but in the seam states that link the gap to the rest of the world—places such as Romania, Honduras, South Africa, and Singapore.²⁶ Imagine a future in which Air Force rescue has become the tool of choice for opening relationships with wary nations and gaining access to parts of the world that would otherwise remain off-limits to the United States. Think also of the opportunity to accumulate a detailed, regionally specific knowledge base that would enhance safe operations should the Air Force or another service need to return. Think of the enduring relationships that could be facilitated when an Air Force rescue unit makes a visit. And think of the value that the captains in

those units will bring to the Air Force when they become colonels.

Imagine a future in which Air Force rescue's capabilities transported into the gap are the service's most visible image of airpower's contribution to victory in the ideological contest that defines the long war. With a unifying vision manifested in operations and images known and respected around the world, rescue will do things that nobody else can do and, by doing them, contribute to increasing the West's influence across many of the globe's ungoverned and disconnected spaces. Envision the transformation of rescue into something new and, in the process, its promotion to a position of strategic relevance in the greatest conflict of our generation. Imagine, if you will, a rescue force for the world. □

Notes

1. *Quadrennial Defense Review Report* (Washington, DC: Department of Defense, 6 February 2006), v, <http://www.defenselink.mil/pubs/pdfs/QDR20060203.pdf>.

2. *The National Security Strategy of the United States of America* (Washington, DC: The White House, March 2006), 10, <http://www.whitehouse.gov/nsc/nss/2006/nss2006.pdf>.

3. *National Strategy for Combating Terrorism* (Washington, DC: The White House, September 2006), 1, <http://www.whitehouse.gov/nsc/nsct/2006/nsct2006.pdf>.

4. *National Security Strategy*, 9.

5. The Sahel (from Arabic لاساحل [sahil], meaning border or coast of the Sahara desert) is the boundary zone in Africa between the Sahara to the north and the more fertile region to the south, known as the Sudan (not to be confused with the country of the same name).

6. Thomas P. M. Barnett, "The Pentagon's New Map," *Esquire*, March 2003, 174, <http://www.thomaspmbarnett.com/published/pentagonsnewmap.htm>.

7. Thomas P. M. Barnett, interview by Harry Kreisler, Institute of International Studies, University of California—Berkeley, 8 March 2005, "Describing the Pentagon's New Map," transcript at <http://globetrotter.berkeley.edu/people5/Barnett/barnett-con0.html>.

8. *Ibid.*

9. An important first step would involve redefining the boundaries of expectations erased in the latest version of its main doctrine document: Air Force Doctrine Document (AFDD) 2-1.6, *Personnel Recovery Operations*. That volume used to be called *Air Force Doctrine for Combat Search and Rescue* but as of 1 June 2005, it has been entirely rewritten and retitled. Perceiving CSAR as "too limited"

in scope, the writers attempt to garner additional operational flexibility by using more terms with more expansive definitions. In the introductory text to AFDD 2-1.6, they attempt to suggest that the new doctrine merely puts CSAR into the larger personnel-recovery context, but this reassurance is unconvincing. A few pages later, for example, it defines the Air Force "PRO [personnel recovery operations] philosophy" in the following remarkable statement, referenced two more times elsewhere in the document: "Although Airmen may place natural emphasis on the recovery of fellow Airmen, Air Force PRO philosophy is based on the assumption that PRO forces must be prepared to recover any isolated personnel anytime, anyplace" (iii, viii, 3). Think about that for a moment. When the chief of staff of the Air Force talks about the doctrinal requirement for the service to recover its own, he describes it as "absolutely fundamental to the culture of the Air Force" and "an ethical and moral imperative." Bruce Rolfsen, "The Chief Speaks," *Air Force Times*, 4 September 2006, <http://www.airforcetimes.com/legacy/new/0-AIRPAPER-2049967.php>. The rescue community's pursuit of something more meaningful has reduced that moral imperative to a mere "natural emphasis." That disconnect offers powerful evidence of the lack of a shared vision within the Air Force rescue community.

10. Adm Edmund P. Giambastiani Jr., US Navy, vice-chairman, Joint Chiefs of Staff (remarks to the Worldwide Personnel Recovery Conference, Washington, DC, 9 January 2007).

11. Operation Enduring Freedom offers an excellent illustration of how the decisions of policy makers can be affected if CSAR is not available. Despite the incredible

pressure on the president of the United States to initiate attacks against the Taliban in Afghanistan as soon as possible, the commencement of hostilities was delayed explicitly because CSAR was not yet in place to support aircraft making strikes in northern Afghanistan. Bob Woodward, *Bush at War* (New York: Simon & Schuster, 2002), 163–64.

12. Donald H. Rumsfeld, "Commentary: A Force for Good," American Forces Press Service, 11 September 2006, <http://www.defenselink.mil/news/NewsArticle.aspx?ID=787>.

13. Examples of that particular operational advantage were evident during operations after Hurricane Floyd (North Carolina, 1999), floods in Mozambique (2000), and Hurricane Katrina (2005). In a more traditional wartime context, one also sees it in Afghanistan, where Air Force rescue forces frequently conduct personnel-recovery and medical-evacuation missions during periods of extreme darkness when conventional Army helicopters cannot fly.

14. "HH-60G Pave Hawk," fact sheet, *Air Force Link*, July 2006, <http://www.af.mil/factsheets/factsheet.asp?fsID=107>.

15. Adm Mike Mullen, "What I Believe: Eight Tenets That Guide My Vision for the 21st Century Navy," United States Naval Institute *Proceedings*, January 2006, 14.

16. Isambard Wilkinson, "Islamist Groups Win Support for Pakistan Quake Aid," *Telegraph.co.uk*, 11 February 2005, <http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2005/11/02/wpak02.xml>.

17. David Rohde, *New York Times* reporter, cited in Colin Adams, "Winning Hearts and Minds in Kashmir," *Religion in the News* 8, no. 3 (Winter 2006), <http://www.trincoll.edu/depts/csrpl/Vol8no3/Winning%20Hearts%20and%20Minds%20in%20Kashmir.htm>.

18. Ibid.

19. Mullen, "What I Believe," 14.

20. This sort of engagement is not entirely unfamiliar to the pararescue community. For years its members have

enhanced their medical training by participating in civilian-paramedic ride-along programs or by logging required clinical time in civilian medical facilities in the United States.

21. The DOD broadly defines the term *security cooperation* as "interactions with foreign defense establishments to build defense relationships that promote specified US interests, develop allied and friendly military capabilities for self-defense and multinational operations, and provide US forces with peacetime and contingency access to a host nation." Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 12 April 2001 (as amended through 1 March 2007), 480, http://www.dtic.mil/doctrine/jel/new_pubs/jp1_02.pdf.

22. Daniel L. Haulman, *One Hundred Years of Flight: USAF Chronology of Significant Air and Space Events, 1903–2002* (Maxwell AFB, AL: Air Force History and Museums Program in association with Air University Press, 2003), 143.

23. SSgt Julie Weckerlein, "PACAF Commander Speaks of Enhancing Partnerships," Air Force Print News, Washington, DC, 26 September 2006, <http://www.af.mil/news/story.asp?storyID=123027913>.

24. "6th Special Operations Squadron," Air Force fact sheet, n.d., <http://www2.hurlburt.af.mil/library/factsheets/factsheet.asp?id=3496>.

25. Lt Col Wray R. Johnson, "Whither Aviation Foreign Internal Defense?" *Airpower Journal* 11, no. 1 (Spring 1997): 79–82, <http://www.airpower.maxwell.af.mil/airchronicles/apj/apj97/spr97/johnson.pdf>.

26. A major outside-CONUS basing strategy is neither unrealistic nor without precedent. Some may recall that the Air Rescue Service used to be a global enterprise with bases in Libya, Saudi Arabia, the Azores, Bermuda, Labrador, Korea, United Kingdom, Japan, Philippines, Spain, and so forth. See Donald D. Little's *Aerospace Rescue and Recovery Service, 1946–1981: An Illustrated Chronology* (Scott AFB, IL: Office of MAC History, Military Airlift Command, 1983).

The basic challenge in multinational operations is the effective integration and synchronization of available assets toward the achievement of common objectives.

—Joint Publication 3-16
Multinational Operations, 7 March 2007



The Cuban Missile Crisis

Forty-Five Years in the Balance

CHARLES TUSTIN KAMPS

DURING OCTOBER 1962, the world was riveted by the events of the Cuban missile crisis, when the United States and Soviet Union stood on the brink of nuclear war. The crisis could have ended in Armageddon since US forces were preparing two operation plans (OPLAN) that would have pitted the superpowers against each other in direct combat. The United States averted disaster, however, when the Kennedy administration imposed a naval “quarantine” (blockade) on Cuba and negotiated a quid pro quo with the Soviets that removed their missiles from Cuba and ours from Turkey.

Why should we have any interest in plans we never executed 45 years ago? The answer is *balance*. For a country like ours, with global responsibilities, the next enemy may prove as deadly as the current one—or worse. A sense of balance and perspective to see the long view is just as necessary as correct analysis of today’s fight. In the Cuban missile crisis, Pres. John F. Kennedy had inherited a military optimized for the nuclear mission to the detriment of other capabilities. We found ourselves playing catch-up.

OPLAN 316 envisioned a full invasion of Cuba by Army and Marine units supported by the Navy after Air Force and naval air strikes. The ability to mount such an operation came at some cost. At the low end of the normal priority chain, Army units in the United States lacked everything from major end items to personnel. Similarly embarrassing, the Navy could not supply sufficient amphibious shipping to transport even a modest armored contingent from the Army.

Planners designed OPLAN 312, primarily an Air Force and a Navy carrier operation, with enough

flexibility to do anything from engaging individual missile sites to providing air support for OPLAN 316’s ground forces. That, of course, was only part of the Air Force mission. In line with overall priorities, defense and counterstrike against the Soviet Union were paramount. While Air Defense Command (ADC) redeployed 161 nuclear-armed interceptors to 16 dispersal fields within nine hours, one-third of the total ADC force maintained 15-minute alert status. Strategic Air Command, at defense readiness condition two, had one-eighth of its 1,436 bombers on airborne alert while dispersing others and reducing ground-alert times. Some 145 intercontinental ballistic missiles stood on ready alert. Our nuclear force was poised to strike.

By 22 October, Tactical Air Command (TAC) had 511 fighters plus supporting tankers and reconnaissance aircraft deployed to face Cuba on one-hour alert. However, TAC and the Military Air Transport Service had problems. The concentration of aircraft in Florida strained command and support echelons; we faced critical undermanning in security, armaments, and communications; the absence of initial authorization for war-reserve stocks of conventional munitions forced TAC to scrounge; and the lack of airlift assets to support a major airborne drop necessitated the call-up of 24 Reserve squadrons.

Even worse, we exhibited the same naïveté of pre-Vietnam days by expecting fighters to eliminate SA-2 surface-to-air missile sites simply by flying low and employing napalm as well as strafing. The fact that we were off balance for operations against Cuba offers a lesson for the future. □

To Learn More . . .

Brugioni, Dino A. *Eyeball to Eyeball*. Edited by Robert F. McCort. New York: Random House, 1991.

Gribkov, Gen Anatoli I., and Gen William Y. Smith. *Operation ANADYR: U.S. and Soviet Generals Recount the Cuban Missile Crisis*. Chicago: Edition Q, 1994.

(Additionally, one may access many declassified documents on numerous Internet sites, such as the *Digital National Security Archive*, <http://nsarchive.chadwyck.com/home.do>.)



True Confessions of an Ex-Chauvinist

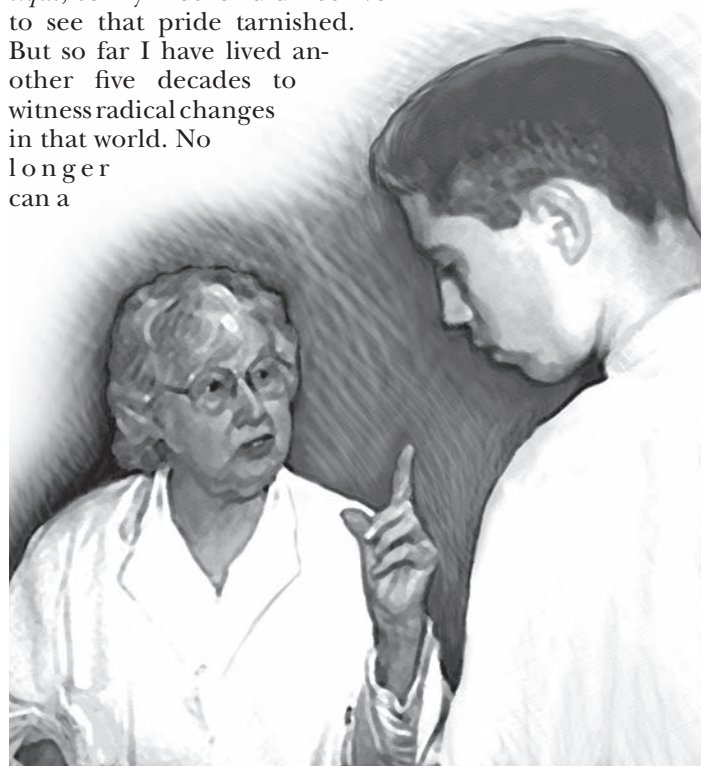
Fodder for Your Professional Reading on Women and the Military

DR. DAVID R. METS*

IT WAS 5 June 1953. One of the world's great feminists (my mother) pinned one of the yellow bars on my new uniform. Talk about working outside the home—a single parent, she had done that every day of her life! Talk about women in combat—I watched her knock out an assaulting male half again her size with one blow! When I was a boy, every time I felt like crying, she would say, “Oh, stop it! You’re just like your sister.” When I was a lad and would whine that something was too heavy for me to lift, she was wont to say, “Oh, come on. Your little sister could lift it!”

In June 1953, I had survived the jump from the 30-foot tower, fully clothed, into the Naval Academy pool. I had found the nerve to get into the boxing ring with a 200-pound classmate.¹ I had flown in open-cockpit biplanes. I had finally mastered the obstacle course. I had survived the stormy transatlantic crossing in a World War II “tin can” (i.e., destroyer). I had taken small boats through the surf in amphibious exercises. I had managed being upside down, underwater in the cockpit of the Dilbert Dunker.² That month I felt like saying to that great feminist, “See Ma, I finally did something that my sister could not.” I did not say that, of course, but a great feminist appeared to have created a chauvinist—and at the time we were both proud of it.

She died in her sixties during her lunch hour at an electronics-parts factory about the time Betty Friedan published *The Feminine Mystique*, so my mother did not live to see that pride tarnished. But so far I have lived another five decades to witness radical changes in that world. No longer can a



*I received assistance to improve earlier drafts of this article from Brig Gen Janet Therianos, USAF; Ms. Cathy Parker; COL Jack Sinnott, USA, retired; and Col Herman Gilster, USAF, retired. The faults that remain are entirely my own.

new lieutenant congratulate himself on doing something his sister cannot. No longer can a recipient of shiny, new silver wings thump his chest, congratulating himself on his manliness. Maybe 100 years from now, American history will proclaim that the world changed more in the last half of the twentieth century than in the first. In an article in the journal *Foreign Affairs*, Francis Fukuyama seems persuaded that this new world will continue evolving in the twenty-first century—increasingly feminized in both political and military affairs. That is to the good, he says, for such an environment in the West will be increasingly peaceful and well ordered.³

My aim in this “Fodder” piece resembles that of all its predecessors: to provide some insights for the air warrior/scholar on an important dimension of the profession and to sug-

gest a dozen important books that might aid in that endeavor. Women now constitute more than 20 percent of the service and are eligible for every job in the Air Force, save special operations. They have written by far the greater part of the literature on gender and the military.

Clearly, leaders of *both* genders must understand women’s importance to the success of the mission. Too, outside the service at least, some individuals assert that women complicate mission accomplishment—and the military leader should be aware of their arguments. At the end of the article, following the pattern of the inspiration for the Fodder series—Col Roger Nye’s book *Challenge of Command: Reading for Military Excellence*—I identify two books for the overview and the rest for depth and mastery.

A Timeline: Women in the Military

1947	USAF founded
1954	USAF Academy legislation signed
1969	President’s Commission on an All-Volunteer Force founded Air Force ROTC opened to women
1970	First American female generals (Army)
1972	Equal Rights Amendment (ERA) passes Congress USAF Academy plans admission of women
1973	Draft ends Women enter flight training in Army and Navy
1974	Involuntary discharge for pregnancy ends
1975	President signs bill admitting women to service academies
1976	First women admitted to service academies Women in the Air Force (WAF) abolished Women admitted to USAF flight training
1981	Supreme Court rejects women’s draft
1982	ERA ratification fails
1991	Tailhook scandal Combat-flying exclusion repealed
1994	Combatant ships opened to women
1999	Women fly combat in Operation Allied Force
2003	Sexual-assault scandal at USAF Academy

Historical Background of Women in Combat

Conventional wisdom has always identified women as the nurturing gender and peacefully inclined, but it characterizes males as violent and aggressive. People still vigorously debate whether those traits reflect learned behavior or a genetic predisposition.⁴ Undoubtedly, women have fought and fought well in wars since time began. However, according to Joshua Goldstein, those are exceptions to the usual—rather rare exceptions in fact. He argues for the occurrence of only two massive, sustained experiences of women in combat. One involved the African kingdom of Dahomey (now the Republic of Benin) from the eighteenth to the late nineteenth century; a third of its army at times consisted of regular female organizations—successful ones at that. The second entailed the use of women in combat in the Red Army of World War II. Those women fought bravely and competently, but the Soviets ended their combat employment as soon as feasible and did not again place them in combat specialties after the war. Although Goldstein describes himself as profeminist, he does assert that the historical record demonstrates that women have never served as primary fighters anywhere—even in the two cases mentioned above, they represented the minority. Elsewhere, they saw heavy use during wartime in support functions but hardly ever in combat—and then inadvertently for the most part.⁵

The First Feminist Wave

In America individual women have fought here and there. However, their participation in what is often known as the First Feminist Wave usually had to do with other things. Feminists were prominent in the abolitionist movement before the Civil War and afterwards in the long campaign to acquire property and voting rights for women. That culminated in the passage of the 19th Amendment to the Constitution right after World War I.⁶ Too, the first wave had functioned as a prime mover in

the ill-fated 18th (Prohibition) Amendment and in the various peace movements. The latter seemed to promise that the feminine influence, once women got the vote, would tend toward a more peaceful world—unhappily it did not immediately turn out that way.⁷ In one of the most influential books since the end of World War II—*The Feminine Mystique* (1963)—Friedan argues that the First Feminist Wave had made a very promising start, opening the way to political participation and higher education for women as well as enhancing the promise for further progress. But then she laments that something went radically wrong.

Women in World War II

American women made a major contribution in World War II, as they had in World War I. They left the home in droves to participate in war industry and other parts of the economy. They also populated several auxiliary organizations for the military, conducting various noncombat functions and thus releasing many men for combat duty—still in support functions as they had served in smaller numbers from 1917 to 1918. In World War II, my feminist mother worked as a crane operator in the Bethlehem Steel shipyard in Quincy, Massachusetts, building aircraft carriers (earning high pay for a woman). Many women got used to the better wages and what they considered more meaningful work than the usual housework drudgery. When the men came home, anticipating a bright new world of peace and prosperity, most of the women had to go—but where? Our crane-operator feminist had to take a job on the line of a tack factory doing random checks confirming that the boxes coming off the line indeed contained 100 tacks—hour after hour, day after day, and month after month!

According to Friedan (looking at the world through what appears to me the rather narrow lens of an upper-middle-class New York suburban housewife), women were “driven” back and trapped into the relatively meaningless drudgery of keeping house for their children and professional husbands, who worked in

the great city. What trapped them? Partially, the postwar colleges. Curricula for women stressed such functional matters as managing homes—not expanding minds. Reading *The Feminine Mystique*, I am not altogether certain who the trappers were, for, presumably, women went into the home-economics courses, marriage, and suburbs voluntarily. But I guess Friedan thought that the culture trapped them, not their individual husbands. Protesting that she did not hate men, Friedan claimed not to disparage the role of the homemaker. Rather, she thought that women needed “something more” to reach the apex of Maslow’s pyramid and thus fill the self-actualization requirement—always through higher education and meaningful (paid) careers outside the home.⁸

That seems likely since Friedan received her education at Smith College and then did graduate work in California, majoring in psychology. Her great book appeared just about the time of Abraham Maslow’s heyday. Maslow’s theory and Friedan’s book have both been criticized for having too narrow a focus.⁹ A splendid writer, however, she made a massive impact with *The Feminist Mystique*, even though it dealt with an elite minority of women. Doubtless, a huge number of overworked American women would have been delighted to experience a little of the boredom suffered by her affluent homemakers in Westchester County.

The Vietnam War and the Ending of the Draft

The war in Vietnam proved traumatic all the way around. Military life came in for wide disparagement, and the antidraft movement caused huge strains on American society. After Pres. Richard Nixon visited China and then concluded Strategic Arms Limitation Treaty I, the threat to national security seemed much diminished. As always, women played a prominent role in the peace movement and the draft protests. Friedan’s restless housewives strove to escape their suburban traps. Nixon attempted to stem the rising discontent by ending the draft in 1973.¹⁰ To cap all that off, the near-simultaneous occurrence of the

Watergate scandal and the fall of Saigon shook American confidence to its very foundations. Nixon’s successor, Gerald R. Ford, moved to stabilize things, but he didn’t last long. Women’s votes were becoming evermore powerful, and before Ford lost the election of 1976, Congress ordered the admission of women to the federal military academies, very much against the preponderance of military opinion.¹¹ Thus, a new day was dawning for the women’s movement as Jimmy Carter came into office with an administration even friendlier to women.¹² Not long after, the Soviets moved into Afghanistan and became active in the Horn of Africa, seeming to mount new threats to the interests of a weakened America. President Carter moved to signal the Kremlin on the dangers of their actions by reversing the decline in defense spending. He also proposed making women subject to draft registration—allegedly to signal his seriousness to the Soviets.¹³ By then women had gained admission to the academies and flying schools of all the services, but, temporarily at least, that was about as far as Congress seemed willing to go in 1979. Some military women, especially officers, wanted the combat specialties opened for females—but few in either the officer or enlisted ranks advocated doing so on anything other than a voluntary basis.¹⁴

Women and the All-Volunteer Force

Meanwhile, a fortuitous juxtaposition of two events greatly assisted both the all-volunteer force and the women’s movement. As the second wave of the feminist movement gathered steam, Congress passed the ERA, which seemed certain to receive early ratification.¹⁵ As the draft ended in 1973, it quickly became quite clear that the services’ source of male recruits in any but the lowest mental categories was drying up. However, women in the highest two brackets were ready and willing to serve. In many cases, they could earn much more in salary and benefits by joining the services than by remaining in the civilian economy. The same did not hold true for top male prospects.

Thus, the rapid increase in high-quality female enlistees made up for the shortfall of good male recruits. Although during that same period, combat specialties on the surface and in the air remained closed to women, the flying schools and academies admitted them in increasing numbers. Nevertheless, women were a great help in support areas; indeed, the all-volunteer force probably could not have succeeded without them.¹⁶

The Academy Mandate

Men seem cursed with the eternal need to repeatedly prove their manliness.¹⁷ In days of old, when society occupied itself with hunting and gathering, combat and hunting offered men the only opportunities for proving their manhood. By 1953 other alternatives had become available.¹⁸ As I suggested in my opening paragraphs, in my case at least, that need was an important factor in my selecting a Naval Academy appointment over admission to a civilian college. That school and its sister academies had long had the reputation of representing the last bastions of male chauvinism. It also made them a favored target for the Second Feminist Wave.

In the spring of 1972, the superintendent of the Air Force Academy, Lt Gen Albert Clark, saw the handwriting on the wall and set his staff to planning for the admission of women as cadets.¹⁹ The rank and file there and at the other academies, however, had little enthusiasm for the prospect.²⁰ Not until October 1975 did Congress pass and the president sign the legislation, and the women prepared to arrive in July of the next year. Harking back to the original experience at the Air Force Academy in the 1950s, junior officers were brought in to serve as surrogate upperclasswomen for the early days. The other academies did not follow suit.²¹ There, upperclassmen provided leadership. In Colorado the scheme did not work out very well. The upperclasswomen came in for training several months early, but the results proved disappointing. In the 1950s, most of the surrogate upperclassmen had been new graduates of the older academies and were

still in pretty good condition.²² In 1976 the females brought in to serve a similar function came from the ranks of junior female officers who volunteered for the task, finding themselves especially challenged in the physical dimensions of the program. However, in the end their participation did help a little because the initial crop of female cadets was in fine condition from the outset and compared favorably to the surrogates who had preceded them to Colorado. In fact, during that first summer, the Air Force Academy experienced less attrition among women than did the other schools.²³ Unlike the other academies, the Air Force Academy quartered females separately at that time and again during the first semester. By the second semester, in the spring of 1977, the women had moved into the integrated squadrons, and the officer upperclasswomen had moved on to new assignments.²⁴

It was almost immediately clear that the women would hold their own academically—and they have done so in all the years since. Some of the male cadets then, and still, thought that the system favored the females, quickly claiming that their physiological characteristics did not meet the demands of military life. Too, results in the area of military training and accomplishment seemed to indicate that the women did not compete on an equal plane, though some of them did excel and achieve high cadet rank. Women's attrition over the first four years was higher than desired, but high attrition all the way around characterized those early postdraft years. The rate at which women left the program continued as a source of disappointment into the 1990s.²⁵

From the beginning, planners anticipated problems with sex and pregnancy. The women had training in avoiding sexual assault and rape from the first summer onward. Self-defense courses came a little later. Developing an equitable policy on pregnancy proved especially difficult because of the problem (then) in proving paternity, yet a female cadet clearly could not perform her duties during pregnancy. Involuntary discharge for expectant mothers had ended in the rest of the Air Force two years earlier, but it was hard to see how a woman could stay up with her class during

pregnancy and maternity leave. Ultimately the policy permitted a pregnant cadet to go home to have her baby and then return to reenter a later class if she could prove that she no longer had legal responsibility for the child.²⁶

In the early years, athletics also caused problems. Nonathletes at all the academies had always grumbled about the special privileges they thought intercollegiate competitors enjoyed—special training tables, for example. Since a good deal of military training occurred during meals at the standard tables and since none of that went on at the training tables, cadets deemed the latter a very valuable privilege. This proved especially troublesome for women. The first classes boasted very high achievers, and almost from the outset a far greater proportion of women than men made the intercollegiate squads, thus escaping the usual Doolie (i.e., freshman) training at meals.²⁷ Further, from the first summer onward, the command attempted to make Doolie training more “positive”—which meant less shouting and humiliation for the freshmen. That plus the high proportion of women on athletic squads led to disgruntlement among the men and tended to confirm their notions of the existence of a pro-female bias. Even after 30 years, in anonymous surveys a significant minority of male cadets still declare that women do not belong at the academy—a perennial problem for command.²⁸

Combat Exclusion

For a long time, the feminist movement held that the last two great barriers to full equality were the admission of women to the academies and the combat-exclusion legislation passed by Congress in 1948—both tough obstacles.²⁹ As noted above, President Carter was rebuffed when he took a shot at the latter, shortly after women began attending the academies. But Congress still would have no part of registering women for the draft.³⁰ The law prevented the assignment of women to aircraft crews with combat missions and to all warships. Service policy denied them admission to combat specialties in the Army and Marine

Corps—largely infantry, artillery, and armor units.³¹ The movement advocating civil rights for Blacks had provided important precedents for the notion with their combat in World War II and Korea. The final proof of full citizenship became a willingness to fight and die for the country.

Then and now, the arguments addressed two issues. According to one side, equity demanded admission of the excluded group to combat for the sake of the Declaration of Independence and its assertion that all men are created equal. The other side urged effectiveness first and then equity. The military existed to fight and win the nation’s wars. Whatever detracted from that purpose deserved rejection. The armed forces, the argument went, were not social laboratories designed to find cures for our domestic woes.³²

Effect of the First Gulf War

During the Gulf War of 1991, tens of thousands of women deployed with US armed forces to combat theaters. Still excluded from combat arms, several were killed by Scud missiles and two were taken prisoner. Continuing technological advancements, such as standoff weapons, seemed to make the distinctions between combat and support specialties less relevant, a point women made to strengthen their case to remove the last barrier. Witness the case of Maj Marie Rossi, an Army transport-helicopter pilot killed in an aircraft accident as the war ended. Proponents argued that the fact that she carried troops and goods forward to combat areas subjected her to as much risk as the male pilots of combat-helicopter gunships. The increasingly technological nature of combat, they maintained, made differences in upper-body strength less relevant. The capture of one enlisted woman and one officer did not seem to result in the horrors for female prisoners that many people feared.³³

Effect of Tailhook

The media and military did much to “hype” the substantial contribution that women made

to the Gulf War, but that publicity alone probably would not have proved sufficient to move Congress and the services to remove some of the combat exclusions. Back in 1948, I had an aviation rating in the enlisted Navy—thoroughly bored and stationed at North Island Naval Air Station, observing manly naval aviators zoom overhead in their beautiful Corsairs and Bearcats. It appeared to me that I could escape into a world of adventure and manliness by applying for admission to the Naval Academy. I never became a naval aviator, but the picture I had was not altogether fantasy. Not long after World War II, Navy flyers formed an association to promote the future of naval aviation. By the 1990s, the Tailhook Association had long held an annual convention, usually in Las Vegas, Nevada.³⁴ Although these gatherings did include seminars and speeches by some heavyweights, they always included late-hour parties that sometimes got pretty raucous.³⁵

The one in 1991 occurred shortly after the conclusion of the Gulf War during a time of national exuberance. Atop that, Navy men have never acquired a reputation for teetotaling or for reticence in pursuit of the opposite gender.³⁶ That combination made the Tailhook convention of 1991 one of the most famous, or infamous, in the history of the organization. Even the most charitable descriptions make a mockery of the “officer and a gentleman” idea, and both the chief of naval operations and the secretary of the Navy had to leave their offices early because of the scandal. No court-martial convictions ensued, but many male officers were otherwise punished, sometimes to the ruination of their careers. Some bad behavior occurred on the part of female officers too, but none of them was punished. On the other hand, the assault victims never had the satisfaction of seeing their attackers convicted in court. Lt Paula Coughlin, however, the most famous of them, did receive a \$400,000 settlement from the Tailhook Association and a \$6,700,000 judgment against the Las Vegas Hilton for failure to provide security. She later resigned from the service.³⁷ The naval investigative system got some bad publicity, and many argue that some innocent

people suffered from a “witch hunt” while certain guilty parties—beneficiaries of immunity and other factors—went unpunished.³⁸

Women Go into Air and Sea Duty during Combat

The combination of publicity coming out of the Gulf War and Tailhook armed the advocates of women in combat.³⁹ Congress soon repealed the legal impediments of 1948 to combat flying and shipboard service, leaving it to the services to open the way. In the mid-1990s, the Navy and Air Force soon did so, placing women at sea aboard combatants and in fighter and bomber cockpits. They soon got their baptism of fire, flying in combat over the Balkans and Iraq.⁴⁰ The Army and Marine Corps, which had not come under those laws, had a better case for exclusion, based on physiological differences in average upper-body strength.⁴¹ Thus, restrictions against women in ground-combat arms and special forces remain in place.

Continuing Problems

Breaching the last barrier did not end the tale. Culture involves more than merely changing laws, training, and barrages of publicity. We know from our reconstruction experience after the Civil War that it is sometimes possible to drive attitudes underground temporarily, but to truly change culture makes for a daunting challenge.⁴² Moreover, human relations are dynamic, not static. The balance is forever changing. Society may have succeeded in civilizing the Tailhook Association, only to find sexual-abuse scandals popping up at the Aberdeen Proving Grounds and the Air Force Academy.⁴³ Even without the scandals, as noted, significant portions of the male cadet and midshipman populations still do not think women belong at any of the academies.⁴⁴ We have yet to reach consensus among some of the most distinguished intellectuals in the land as to whether aggressiveness is a genetic or an acquired trait. We face a long and difficult task in obtaining a true consensus among

cadets, albeit we think that leadership and training can do much to control any antisocial tendencies.⁴⁵

After both the Gulf War and Tailhook, in the spring of 1993, sexual-assault trouble occurred at the Air Force Academy. The superintendent of the day, Lt Gen Bradley Hosmer, himself an academy graduate, did begin important and effective reforms to control the problem: establishing a sexual-assault hotline available around the clock, founding a Sexual Assault Services Committee to coordinate policies and information, and creating Sexual Assault Awareness Week (later, a month) dedicated to training and education. The academy also founded the Character Development Center during those years. Women had reached the highest cadet ranks in the years since 1976, and female graduates were prospering on the line of the Air Force. However, the experience with graduate Kelley Flinn alone would have been enough to warn us all against complacency.⁴⁶ Still, we had room to hope that reforms were working to some extent and that things were improving.

At the onset of 2003, however, a storm broke that rivaled the Navy's Tailhook problem. Three women cadets or ex-cadets sent an e-mail to the world, including members of Congress and the media, saying that the sexual-assault problem at the Air Force Academy was running wild, that women could not report assaults because they feared punishment while the perpetrators went unpunished, and that the command remained unconcerned.⁴⁷ The events prompting the e-mail took place in the immediate aftermath of al-Qaeda's attack on the World Trade Center and the Pentagon.

The secretary and chief of staff of the Air Force had been fully occupied with those events when the trouble in Colorado burst upon the scene. They dispatched a working group to the academy almost immediately. Led by Mary Walker, the Air Force counsel, it

had orders to investigate the charges and make recommendations. It did so rather rapidly, and by March the secretary and chief had instituted the Agenda for Change at the academy. Moreover, Air Force leadership almost immediately replaced the superintendent and commandant. Congress also appointed former congresswoman Tillie Fowler to lead a commission to investigate and recommend. Its report, issued in September 2003, generally seconded the many measures in the Agenda for Change but lamented the loss of confidential reporting for the victims of sexual assault. It also accused the Walker Working Group of failing to cite the shortcomings of Headquarters Air Force in the whole affair.⁴⁸

Meanwhile, the Department of Defense instructed its inspector general (IG) to establish accountability for the difficulties at the academy. That report, which came later, assigned faults by name to some of the academy and headquarters leaders—though that included neither the sitting commandant nor most of his predecessors.⁴⁹ The Air Force had also tasked its IG to review the academy's actions in response to sexual-assault charges over the previous 10 years. Only a few of those had resulted in court-martial actions, and the IG agreed with the academy's investigation and handling procedures in all cases but one.⁵⁰

Very often, one person's firm conclusion is another's pure speculation. Yet I offer the conclusions below as so fairly well established that readers of this journal might want to consider them as assumptions for their personal, professional study of the subject of women in the military. I also offer a list of suggested hypotheses that readers might want to use in their professional reading on the subject of this article. Folks on all sides of the debates consider some of them the ground truth, but this journal's audience might want to test them for validity in their further readings.

My Tentative Conclusions

- Women can fight and have fought with competence and aggressiveness.
- Women can handle scientific, technical, and mechanical work.
- Women can fly and have flown high-performance aircraft.
- Women can perform and have performed effectively at sea.
- Women are at least the intellectual equals of men.
- Women, on average, are not as strong in upper-body strength as men, and they have less physical endurance in the short term, though they enjoy a longer life expectancy.
- Culture changes only slowly.
- A built-in political conflict surrounds the integration of women, based on the demand for equity on the one hand and the requirement for military effectiveness on the other.
- Tension exists between the need to protect the confidentiality and privacy of an alleged victim of sexual assault and the equal need to consider the alleged perpetrator innocent until proven guilty.
- Tension exists between the need to protect the privacy of alleged victims and the need to have timely information for enabling a legal prosecution of perpetrators.
- Women have successfully integrated themselves into all the federal academies and will remain there for the foreseeable future.

Suggested Hypotheses for Further Study and Debate

- The question of whether male aggressiveness and propensity for violence are acquired or biological characteristics remains unproven.
- Part of the trouble with sexual harassment and sexual assault arises from biological roots; another part has its origins in cultural norms.
- Men generally have a psychological need to prove and prove again their manliness.
- Women do not have a similar need to prove their femininity.
- Sexual tension is inevitable in mixed-gender units.
- Undesirable features of a culture can be controlled to some degree through legislation, training, and leadership.
- The definitions of sexual assault and harassment are broad and inconsistent.
- Women may never be admitted to ground-combat units in the US forces.
- Women now comprise about 20 percent of the Air Force; they have largely been integrated, but it remains to be seen whether increased numbers will solve remaining challenges.

The intense study of all the books in the sampler offered below will certainly not make us experts on the subject of women in the military, but it may help an air warrior build a conceptual framework for ideas to expand his or

her understanding of a complex issue. Too, it contains works from various viewpoints in the hope that unreformed chauvinists or extreme feminists will have some new fodder to chew on. □

A 12-Book Sampler for Reading on Women in the Military*

Two for the Overview

The Feminine Mystique by Betty Friedan. New York: Norton, 1963.

This catalyst for the second wave of feminism argues that middle-class women trapped in the suburban home are subject to unfair limitations in their growth potential. Cofounder of the National Organization for Women, the author served as its first president.

War and Gender: How Gender Shapes the War System and Vice Versa by Joshua S. Goldstein. New York: Cambridge University Press, 2001.

A fine scholar analyzes the subject from a multidisciplinary viewpoint at many different levels. A must-read.

Ten for Depth and Mastery

Who Will Fight the Next War? The Changing Face of the American Military by Martin Binkin. Washington, DC: Brookings Institution, 1993.

A fairly dispassionate, short analysis of the subject.

Women and the Military by Martin Binkin and Shirley J. Bach. Washington, DC: Brookings Institution, 1977.

An earlier analysis made the point that juxtaposition of the end of the draft and the maturing of the Second Feminist Wave made the increasing use of women in the military possible and essential.

The Air Force Academy: An Illustrated History by George V. Fagan. Boulder, CO: Johnson Books, 1988.

Though a coffee-table book, the scholarship is fine, and the history is an honest one, covering the admission of women to the Air Force Academy, among other things. The author has been associated with the academy since its founding.

Ground Zero: The Gender Wars in the Military by Linda Bird Francke. New York: Simon & Schuster, 1997.

Written by a hard-core feminist who conducts an extensive and well-written analysis of the subject, this book concludes that the full integration of women is impossible because of the unyielding macho culture of the services.

*None of us will live long enough to read all of the literature on gender and war, so my list is only suggestive, not authoritative. It includes works from both sides of the argument and some from men—though women have penned the vast preponderance of the literature.

The Kinder, Gentler Military: Can America's Gender-Neutral Fighting Force Still Win Wars? by Stephanie Gutmann. New York: Scribner, 2000.

Writing equally well and from the opposite viewpoint from Francke, Gutmann makes the basic argument that the attempt to integrate women into all service specialties is making the military a hollow shell.

Women in the Military: An Unfinished Revolution by Jeanne Holm. Novato, CA: Presidio Press, 1992.

Written by a famous Air Force major general, this book argues that the integration of women into the military is highly beneficial but has not gone far enough.

Women in the Line of Fire: What You Should Know about Women in the Military by Erin Solaro. Emeryville, CA: Seal Press, 2006.

This well-written, recent argument advocates elimination of the remaining barriers to women in ground-combat units of the Army and Marine Corps.

The Weak Link: The Feminization of the American Military by Brian Mitchell. Washington, DC: Regnery Gateway, 1989.

Written by a hard-core opponent of integrating women into the military.

Dress Gray: A Woman at West Point by CPT Donna Peterson. Austin, TX: Eakin Press, 1990. The author is an early and articulate graduate of the US Military Academy and a firm believer in the utility of women in the Army. She left the service after a short time but clearly retains a very high opinion of the Military Academy despite the obstacles she faced as a cadet.

Bring Me Men and Women: Mandated Change at the U.S. Air Force Academy by Judith Hicks Stiehm. Berkeley: University of California Press, 1981.

Written by a feminist who speaks with authority about the initial integration of women at the Air Force Academy. She resided at the academy for several months while researching the book.

The 13th in a Baker's Dozen

Bullies and Cowards: The West Point Hazing Scandal, 1898–1901 by Philip W. Leon. Westport, CT: Greenwood Press, 1999.

This splendid little book by a Citadel professor shows that such events as Tailhook, cheating scandals, and sexual-assault troubles are not altogether new. Read it to obtain some perspective on the subject.

Notes

1. For a long time, women at the academies participated in a self-defense course instead of boxing. However, according to Vice Adm Rodney Rempt, women at the Naval Academy recently have become involved in boxing. "State of the Academy" (remarks, Conference Commemorating 30 Years of Women at the US Naval Academy, Annapolis, 8 September 2006).

2. The Dilbert Dunker was a mock airplane cockpit on a slide next to a pool. Lifeguards were posted on each

side. A midshipman, fully clothed, donned an inflatable life vest and a parachute harness, and strapped himself into the cockpit. Released down the slide, the dunker inverted in the water so that the victim found himself upside down underwater. He had to unstrap the seat belt, swim downward, get out of the parachute harness, inflate the life vest, rise to the surface, and climb into a floating inflatable raft. If the midshipman did not do so in a certain time, the lifeguards dived in to rescue him—and he

got the chance to try and try again, or he did not graduate. At the time, the same applied to a midshipman jumping from the tower: either he jumped and swam across the pool or he did not graduate.

3. Francis Fukuyama, "Women and the Evolution of World Politics," *Foreign Affairs* 77 (October 1998): 24–40. He does declare, though, that some limits exist. The socialization process can restrain male tendencies toward violence and domination to some extent, but they are to some degree founded in biology and thus not easily eliminated. He also points out a growing and important role for females in the support parts of the armed forces, but he characterizes integrating combat units as attempting the unnatural, given the utter dependence upon male bonding, which the proximity of women will certainly undermine. His persuasive arguments do not go uncontested, for in subsequent issues feminist scholars stoutly oppose his arguments with convincing pieces of their own. Among other things, they question whether male violence and aggression are really genetically based and whether individual characteristics of either gender really determine issues of war and peace. See Barbara Ehrenreich et al., "Fukuyama's Follies," *Foreign Affairs* 78 (January/February 1999): 118–29.

4. Fukuyama, "Women and the Evolution of World Politics," 24–26. The notion that the genders are biologically different in the psychological dimension is an anathema to many feminists, but he points to significant and growing evidence that male violence and aggressiveness have some genetic roots—and not just among humans. See also Sarah Glazer, "Are There Innate Differences between the Sexes?" *Congressional Quarterly* 15 (20 May 2005): 1–2, <http://library.cqpress.com/cqresearcher/document.php?id=cqresre2005052000&ty> (accessed 8 September 2006).

5. Joshua S. Goldstein, *War and Gender: How Gender Shapes the War System and Vice Versa* (New York: Cambridge University Press, 2001), 60–64, 66–68; and Martin van Creveld, "Why Israel Doesn't Send Women into Combat," *Parameters* 23 (Spring 1993): 5. Van Creveld agrees on this point. See also Cecile S. Landrum "The Israeli Fighting Women: Myth and Facts," *Air University Review*, November–December 1978, <http://www.airpower.maxwell.af.mil/airchronicles/aureview/1978/nov-dec/landrum.html> (accessed 6 March 2007). The myth was that Israeli women had always fought alongside men in their many wars against Arabs, but that notion was discredited in Landrum's article, among other places. Women had briefly fought in desperate circumstances of a defensive nature in 1948—and then only in small numbers. In all the wars that followed, they were excluded from combat.

6. Sarah Glazer, "Are Women Returning to a 1950s Mind-Set?" *Congressional Quarterly* 16 (14 April 2006): 11–12, <http://library.cqpress.com/cqresearcher/document.php?id=cqresre2006041400&ty> (accessed 8 September 2006).

7. Betty Friedan, *The Feminine Mystique* (New York: Norton, 1963), 81–101. Clearly the women's vote has long been a formidable factor in national politics, but the increase in female participation in office has not been proportionate and remains rather thin. Jane S. Jaquette, "Women in Power: From Tokenism to Critical Mass," *Foreign Policy*, no. 108 (Fall 1997): 37. Similarly, though the numbers of women have been increasing rapidly in the

Air Force and their promotions at the lower and middle levels have been better than those for their male counterparts, they are still not very numerous at the top levels.

8. Dr. C. George Boeree, "Abraham Maslow, 1908–1970" <http://www.ship.edu/~cgboeree/maslow.html> (accessed 29 August 2006). Boeree explains Maslow's theory as arranging psychological needs in various layers of a pyramid. The bottom layer includes physiological needs such as food, air, and water. The second layer includes safety needs such as protection and stability, which become a concern after the first layer is largely satisfied. The next above are belonging or love needs, and the fourth layer includes having the respect of others plus one's own self-respect. Threats to any of the layers below could drive a person's concerns downward. At the apex of the pyramid is self-actualization, which may have been what Friedan was talking about when she argued that suburban, middle-class wives needed "something more."

9. Ibid.; and Joanne Boucher, "Betty Friedan and the Radical Past of Liberal Feminism," *New Politics* 9, no. 3 (Summer 2003), <http://www.wpunj.edu/icip/newpol/issue35/boucher35.htm> (accessed 28 August 2006).

10. Pamela M. Prah, "Is the Pentagon Using a 'Backdoor' Draft?" *CQ Researcher* 15 (19 August 2005): 2, <http://library.cqpress.com/cqresearcher/document.php?id=cqresearcher2005081900&ty> (accessed 8 September 2006).

11. Lt Gen Albert P. Clark, USAF, "Women at the Service Academies and Combat Leadership," *Strategic Review* 5 (Fall 1977): 64.

12. Judith Hicks Stiehm, *Bring Me Men and Women: Mandated Change at the U.S. Air Force Academy* (Berkeley: University of California Press, 1981), 91. Indeed, during the inaugural parade of 1977, the usual order in the ranks was reversed so that President Carter could see the short women as they passed the reviewing stand.

13. Prah, "Is the Pentagon Using a Backdoor Draft?" 1318. Both Congress and the Supreme Court quashed the Carter proposal at the time. Cong. Charles B. Rangel proposed a similar draft measure in 2003, but it was voted down in the House, 402–2, with Rangel voting against his own proposal.

14. Rodman D. Griffin, "What Role Should Women Play in the Shrinking Military?" *CQ Researcher*, 25 September 1992, <http://library.cqpress.com/cqresearcher/document.php?id=cqresre1992092500&ty> (accessed 7 September 2006).

15. Glazer, "Are Women Returning?" 13; and Lt Gen Albert P. Clark, USAF, "Women at the Service Academies," *Strategic Review* 5 (Fall 1977): 64.

16. Martin Binkin and Shirley J. Bach, *Women and the Military* (Washington, DC: Brookings Institution, 1977), 64–77; and *Report of the Defense Task Force on Sexual Harassment and Violence at the Military Service Academies* (Washington, DC: Department of Defense, June 2005), 8, http://www.dtic.mil/dtfs/doc_recd/High_GPO_RRC_tx.pdf. At the opposite pole is former secretary of the Navy (and US Naval Academy graduate) James Webb, who argued that male midshipmen still tried and needed to prove their manhood by traditional means. But, he says, the presence of women at the Naval Academy denied them the oppor-

tunity. See his article "Women Can't Fight," *Washingtonian*, November 1979, 273.

17. Michael Kimmel, *Manhood in America: A Cultural History* (New York: Free Press, 1996). Kimmel dedicates his entire work to the proposition that American men have always been obsessed with a forlorn hope of proving their manhood—and that doing so is impossible. Thus they are doomed to be eternally frustrated unless they adopt the Kimmel solution: men can succeed only by giving up the chase and welcoming females, gays, and non-white races as equals. Only then can they fulfill their need for self-actualization. Although a sociologist in the state university system of New York, Kimmel has not written a sociological study here—or even a cultural history. One of the chapters, "The Masculine Mystique," suggests that he is envious of Friedan and would like this book to serve as the male counterpart to Friedan's tremendously successful work. In *Bring Me Men and Women*, Judith Hicks Stiehm says that some Navy men testified in Congress that admission of women might impair motivation for the males who sought appointment to demonstrate their manliness (31). See also Webb, note 16.

18. Andrea L. Smalley, "'I Just Like to Kill Things': Women, Men and the Gender of Sport Hunting in the United States, 1940–1973," *Gender and History* 17 (April 2005): 183–209. Smalley argues that in modern times, insofar as sporting magazines were concerned, hunting was not a gender-specific sport until after World War II. In the nineteenth century and up until World War II, it generally had been something that members of the upper class had done in their leisure time; members of the working class stayed too busy to indulge. But the increasing entry of women into the male workplace and the expansion of hunting to include the working classes caused editors to emphasize hunting as a macho endeavor that would help males establish their masculinity.

19. George V. Fagan, *The Air Force Academy: An Illustrated History* (Boulder, CO: Johnson Books, 1988), 186.

20. Clark, "Women at the Service Academies," 64–65.

21. *Ibid.*, 69.

22. At least two future four-star generals were among the first crop of surrogate upperclassmen: Gen Charles Gabriel and Gen Jerome O'Malley.

23. Lois B. DeFleur et al., "Sex Integration of the U.S. Air Force Academy: Changing Roles for Women," *Armed Forces and Society* 4 (Summer 1978): 620.

24. Fagan, *Air Force Academy*, 193–95; and Stiehm, *Bring Me Men and Women*, 110–29.

25. Stiehm, *Bring Me Men and Women*, 121, 129; Goldstein, *War and Gender*, 97; Sharon Hanley Disher, "30 Years of Women at USNA: A Success Story," *Shipmate* 69 (September 2006): 17; Rempt, "State of the Academy"; and Lt Col Laura A. H. DiSilverio, *Winning the Retention Wars: The Air Force, Women Officers, and the Need for Transformation*, Fairchild Paper (Maxwell AFB, AL: Air University Press, 2003), http://www.maxwell.af.mil/au/aupress/fairchild_papers/DiSilverio/DiSilverio.pdf.

26. "Mom, the Cadet," *Time in Partnership with CNN*, 28 November 1977, <http://www.time.com/time/magazine/article/0,9171,919137,00.html> (accessed 14 September 2006).

27. In "State of the Academy," Rempt reports that at that moment, 41 percent of the Naval Academy women were on intercollegiate squads.

28. Brian Mitchell, *The Weak Link: The Feminization of the American Military* (Washington, DC: Regnery Gateway, 1989), 48–60. Mitchell's book is obviously hostile to women in the military. See also Clark, "Women at the Service Academies," 69.

29. Stephanie Gutmann, *The Kinder, Gentler Military: Can America's Gender-Neutral Fighting Force Still Win Wars?* (New York: Scribner, 2000), 147.

30. Jeanne Holm, *Women in the Military: An Unfinished Revolution* (Novato, CA: Presidio Press, 1992), 353–56.

31. Clark, "Women at the Service Academies," 65.

32. Goldstein, *War and Gender*, 101; and Paolo Valpoline et al., "Gender and War," *Jane's Defence Weekly* 31 (23 June 1999), <http://www8.janes.com/search/documentview.do?> (accessed 9 September 2006).

33. It seems that the Iraqis did treat both prisoners better than had been anticipated, and at first both denied having been sexually assaulted. However, some time after she had been liberated, Maj Rhonda Cornum, an Army doctor, admitted that though her general treatment had not been that bad, she had been sexually assaulted but not raped. Melissa Rathbun-Nealy, the captured enlisted woman, reported that her own treatment had been civilized. Gutmann, *Kinder, Gentler Military*, 153; and Goldstein, *War and Gender*, 94–96, 149.

34. So named because of the metal hook beneath and at the rear of the aircraft fuselage. It is designed to engage the arresting gear on the carrier deck and rapidly halt the aircraft upon touchdown.

35. Gutmann, *Kinder, Gentler Military*, 159.

36. Griffin, "What Role Should Women Play?"

37. *Ibid.*, 187; and Christopher Hanson, "Women Warriors: How the Press Has Helped—and Hurt—in the Battle for Equality," *Columbia Journalism Review*, May/June 2002, 4–5, <http://www.cjr.org/issues/2002/3/media-grossman.asp> (accessed 14 November 2006). Hanson argues that the television magazines have perhaps inadvertently weakened the women's movement. Their format has taken the form of the TV journalist acting in effect as the knight in shining armor, galloping to rescue a female victim as in *The Perils of Pauline*. The point is that they model the female officers as victims in need of protection—hardly compatible with the vision of the vigorous, brave combat leader who can take care of herself.

38. William H. McMichael, *The Mother of All Hooks: The Story of the U.S. Navy's Tailhook Scandal* (New Brunswick, NJ: Transaction Publishers, 1997), xii–xiii, 302–3, 325–37.

39. *Ibid.*, 95.

40. Greg Seigle, "Gender and the Military," *Jane's Defence Weekly* 31 (23 June 1999), <http://www8.janes.com/search/documentview> (accessed 8 September 2006).

41. That part of the process may not be over yet, as witnessed by CPT Adam N. Wojack, USA, "Integrating Women into the Infantry," *Military Review* 82, no. 6 (November–December 2002): 67–74. Wojack, a serving infantry officer, favors integrating women into combat arms, and *Military Review* is an official Army journal (note, however, that the article includes a disclaimer that opinions are

those of the author only). The admission of women to combat aircraft and warship crews seems to have cooled the drive against exclusion but certainly did not eliminate it. See Erin Solaro, *Women in the Line of Fire: What You Should Know about Women in the Military* (Emeryville, CA: Seal Press, 2006). Solaro's entire volume argues for eliminating the last barriers of exclusion from the Army's and Marine Corps' ground-combat units.

42. Lt Col Karen O. Dunivin, *Military Culture: A Paradigm Shift?* Maxwell Paper no. 10 (Maxwell AFB, AL: Air War College, 1997), 16, http://www.maxwell.af.mil/au/aupress/Maxwell_papers/Text/mp10.pdf.

43. Goldstein, *War and Gender*, 97–98.

44. In "State of the Academy," Rempt reports that the latest surveys show that the percentage of male midshipmen who so state is now down to six or seven.

45. Goldstein, *War and Gender*, 96–97; and Dunivin, *Military Culture*, 26.

46. Kelly Flinn, *Proud to Be: My Life, the Air Force, the Controversy* (New York: Random House, 1997). Flinn graduated with the class of 1993, went through pilot school, and became the first woman admitted to the B-52 program. After training, she was assigned to a far-northern base and became sexually involved with the spouse of an enlisted person. In the process, she lied to her commander and disobeyed orders to stay away from the man. Threatened with a court-martial on those grounds, she chose to leave the service instead of facing those charges. The media made much of her position as a qualified B-52 pilot, but

she had not been on the line long enough to have qualified as an aircraft commander. Her book was on the streets two months after she left the service.

47. "Report of the Panel to Review Sexual Misconduct Allegations at the U.S. Air Force Academy" (Arlington, VA: The Panel, 22 September 2003), 10, (hereinafter Fowler Panel Report), http://eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/23/5c/8b.pdf; "Evaluation of Sexual Assault, Reprisal, and Related Leadership Challenges at the United States Air Force Academy," Report no. IPO2004C003 (Washington, DC: Office of the Inspector General at the Department of Defense, 3 December 2004), i (hereinafter DOD IG Report); and "Air Force Inspector General Summary Report Concerning the Handling of Sexual Assault Cases at the United States Air Force Academy" (Washington, DC: Air Force Inspector General's Office, 14 September 2004), (hereinafter AFIG Report), <http://www.af.mil/shared/media/document/AFD-060726-033.pdf#search=%22A%20inspector%20general%sexual%assault%22> (accessed 14 September 2006).

48. Fowler Panel Report, 1–7; *Report of the Defense Task Force*, 3–4; and "Report of the Working Group Concerning the Deterrence and Response to Incidents of Sexual Assault at the U.S. Air Force Academy" (Washington, DC: Headquarters US Air Force, June 2003), i.

49. DOD IG Report, v, 42–140.

50. AFIG Report.

Fighting and winning the [global war on terrorism] requires commitment, capability, and cooperation from allies and partners around the world. We depend on our international partners to secure their territory, support regional stability, provide base access and overflight rights, and contribute a host of air, space and cyber power capabilities as interoperable coalition partners. As the pace of economic, political and cultural globalization increases, the importance of strong global partnerships—both now and in the future—is abundantly clear.

—2007 U.S. Air Force Posture Statement



Revised USAF Doctrine Publication

Air Force Doctrine Document 2-1.8, *Counter-Chemical, Biological, Radiological, and Nuclear Operations*

LT COL CHARLES E. COSTANZO, PhD, USAF, RETIRED

THE THREAT OR use of chemical, biological, radiological, or nuclear weapons by hostile regimes and terrorists represents one of the most difficult challenges facing our nation and our Air Force.” So observes Maj Gen Allen G. Peck, commander, Headquarters Air Force Doctrine Center, Maxwell AFB, Alabama, in the foreword to Air Force Doctrine Document (AFDD) 2-1.8, *Counter-Chemical, Biological, Radiological, and Nuclear Operations*, 26 January 2007.¹ This publication substantially revises and significantly improves its predecessor, published on 16 August 2000. The new doctrine document replaces the previous Air Force approach to counter-chemical, biological, radiological, and nuclear (C-CBRN) operations with a more robust methodology and provides Air Force-specific guidance for those operations.

Chapter 1 introduces the concept of Air Force pillars for C-CBRN operations as well as their relationship to joint mission areas, and chapters 2–6 elaborate upon those matters. These interlinked, operational-level pillars—proliferation prevention, counterforce, active defense, passive defense, and consequence management—are designed to support the overarching guidance provided in the *National Military Strategy to Combat Weapons of Mass Destruction* (Washington, DC: Chairman of the Joint Chiefs of Staff, [2006]); they also support the pillars identified in Joint Publication 3-40, *Joint Doctrine for Combating Weapons of Mass Destruction*, 8 July 2004, and the *National*

Strategy to Combat Weapons of Mass Destruction (Washington, DC: The White House, 2002). The earlier edition of AFDD 2-1.8 addressed proliferation prevention, counterforce, active defense, and passive defense as major components to counter hostile nuclear, biological, or chemical (NBC) operations. The revised and expanded document adds consequence management and treats all five areas as pillars supporting an overall strategy, thus bringing AFDD 2-1.8 into closer alignment with national strategy and joint doctrine. Moreover, the earlier version devoted only five pages to proliferation prevention, counterforce, active defense, and passive defense, while the latest covers the five pillars in 32 pages. Clearly, measures to prevent proliferation or actions taken to deter, deny, degrade, destroy, or defend against CBRN weapons are important, but the inclusion of consequence management in the revised AFDD gives an expeditionary air force critical understanding of how to manage and mitigate the consequences of an attack.

The new document also describes, albeit briefly, the strategic enablers (intelligence, international partnerships, and strategic communications) that underpin the five pillars and enhance the Air Force’s C-CBRN operations. Its predecessor discussed only the use of command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) assets and counter-NBC terrorism as crosscutting elements that could affect the components of counter-NBC operations. Ad-

ditionally, terminology in the new AFDD 2-1.8 not only adopts the same title (*strategic enablers*) but also uses names and descriptions similar to those in the *National Military Strategy to Combat Weapons of Mass Destruction*, again bringing Air Force doctrine closer to joint guidance. Furthermore, chapter 7, “Support Operations,” improves upon the logistics and sustaining activities discussed in the earlier document. Finally, chapter 8 addresses the requirement for education, training, and exercises in C-GBRN operations in much the same way as did the earlier publication.

The emergence of more guidance in the seven years following the appearance of the first version of AFDD 2-1.8 provided a rich foundation for updating it, resulting in a

much-improved document. Further, the new, expanded AFDD—almost twice as long as its predecessor—offers in-depth treatment of C-GBRN operations. However, it still does not provide a detailed elaboration of CBRN weapon characteristics, the discussion of which remains generic and not entirely informative. Nevertheless, in light of the threat posed by CBRN weapons, all Airmen should carefully study the revised AFDD 2-1.8. □

Note

1. The Air Force Doctrine Center will be renamed the Air Force Doctrine Development and Education Center, effective 1 August 2007.

I am an American Airman. I am a warrior. I have answered my nation's call.

I am an American Airman. My mission is to fly, fight, and win. I am faithful to a proud heritage, a tradition of honor, and a legacy of valor.

I am an American Airman, guardian of freedom and justice, my nation's sword and shield, its sentry and avenger. I defend my country with my life.

I am an American Airman: wingman, leader, warrior. I will never leave an Airman behind, I will never falter, and I will not fail.

—The Airman's Creed



Space: The Frontiers of Modern Defence by K. K. Nair. Knowledge World (<http://knowledgeworldonline.com/index.htm>), 5A/4A Ansari Road, Darya Ganj, New Delhi-110002, 2006, 254 pages, \$25.00 (hardcover).

Early in 2007, China tested its satellite-killing weapon, a medium-range KT-1 ballistic missile. The news met with international condemnation, particularly in the United States, whose monopoly in space-based navigational and surveillance technology was threatened. India, too, felt the anxiety even though critics argued that China had a right to challenge the United States' monopoly of space. China had pressed for treaties outlawing arms in space, which the United States had summarily ignored.

India, a tiger economy with fragile relations with the neighbouring countries of Pakistan and China, may have much to be concerned about. Squadron Leader K. K. Nair writes a persuasive treatise covering most, if not all, areas of the use of space for India's national security. Knowledgeable in theory as well as versed in strategic and practical import, the author has a comprehensive grasp on the terrain. With an eye to the history and capability of other established and emerging space powers, *Space: The Frontiers of Modern Defence* is composed with a purpose—to encourage the merging of air defence and space defence in India, which, up until now, have largely operated in separate spheres.

Whilst Nair lauds India's progress and achievements—from transporting its rockets on bicycles

and payloads on bullock carts in the 1960s to developing the world's first satellite to provide support for educational projects (EDUSAT)—he is also mindful of the fact that India's space programme is overly focused on national civil development and welfare to the neglect of military needs. This has led to some irksome situations: despite the presence of the civilian Department of Space, which has the largest constellation of remote-sensing satellites in the world, the Indian military still has to scout for commercial imagery from agencies such as the United States' Space Imaging and Israel's Ofeq.

To alleviate such problems, the author proposes "a national space programme where the civil and military aspects complement and draw strength from each other" (p. 255). He asserts that this "makes enormous economic sense" (p. 19). For one, no "budget-draining" is required to transfer civilian to military space endeavours: "Launchers make no difference between civil and military payloads" (p. 226). For another, unlike conventional military systems, which need constant updating at great cost, space systems do not require such expenditure once installed.

To this end, the book proposes a road map for military utilisation until the year 2037. Well aware that fine plans may become mothballed when faced with the inertia of institutions, however, the author suggests training and educating leaders and specialists who could take India to the next level in terms of the militarization of space.

Overall, the book provides a good balance among the informational, theoretical, and propositional. Chapter 5, on the inadequate legislation pertaining to technologies in outer space, is particularly excellent.

My contention with the book is that it makes some dubious generalisations under the banner of objectivity. For instance, the author states without any evidence that "war and conflict are inherent parts of human nature" (p. 68). His premise is also based on the idea that the "high ground" must be conquered (p. 42), failing to take on board the importance of stealth and strategy, which can sometimes resist surveillance: high ground did not help either in the thick jungles of the Vietnam War with the United States or, as the author also mentions, in the detection of the Pokhran II tests by US satellites.

Nair's proposals for the militarization of space are overly glowing. There is no mention of technological problems in both space and air domains, which have littered India's past. Nor is space-based information foolproof, as evident in the Gulf War of 1991, in which all attacks by precision-control missiles were deemed to result in collateral as opposed to civilian casualties. Accidents still happened.

In fact, one finds much recourse to the example of Operation Desert Storm as the "first space war" because every aspect of military operations depended largely on support from space-based systems (p. 18). Nair offers little coverage of other wars or a sketching out of potential scenarios for India that could make the case of space-based defence more convincing.

When it comes to accounting for China and Pakistan, the book spares no criticism—firstly, for the collusions between the two countries. Nair deems them the most dangerous for wanting to carve out national territory in outer space despite the Outer Space Treaty of 1967, which considers space the province of all mankind (p. 144).

Secondly, the author analyzes the ominous signs of China's mighty aspirations to conquer space. This could "trigger a space weaponisation race in addition to the prevailing nuclear competitions and tensions" (p. 133), which raises the question, does India want to encourage this? Furthermore, why doesn't the United States come in under the scalpel here for setting the whole agenda in the first place?

There are several other unanswered questions. Nair suggests that since space research is already well funded in India, some of this can be complementary to the needs of the military. But when it comes to other countries, he notes how costs of space-based defence can act as a "limiting rider" (p. 86). Undoubtedly extra funds will be required for defence-specific developments. Where will these come from and at what costs? How is it to be developed—indigenously or in cooperation with other countries? It is not clear whether he is arguing for space enhancement of ordinary wars or also the militarization of space.

Can India's resources cope with the increased expenditure if it is seen as an aggressor nation in space? Is it in a position to counter perceived enemies with antisatellite and directed-energy systems as well as microsatellite configurations and jamming weaponry, and can it have the potential to detonate nuclear devices in space that can release an electromagnetic impulse which could cripple space assets in the targeted vicinity? Does it want to start playing that war game with more powerful

countries? This is on top of the unmentioned consequences of increased use of space that could add to the space-debris problem. Out of sight, out of mind, it seems.

There is a fine line between protecting national assets and becoming an aggressor nation at the cost of other national developments for the betterment of society. Striking the balance is key.

Dr. Raminder Kaur

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A Perfect Hell: The True Story of the Black Devils, the Forefathers of the Special Forces by John Nadler. Presidio Press (Random House Publishing Group) (<http://www.randomhouse.com/rhpg>), 1745 Broadway, 18th floor, New York, New York 10019, 2006, 416 pages, \$15.95 (trade paperback); 2007, 384 pages, \$7.99 (softcover).

Special forces—again? In the 1960s, few people knew about the training and employment of a certain group of American soldiers in what has today become known as "black ops." Today, it is fashionable and often desirable for military and civil leaders to have special-operations experience in their records, whereas decades ago, it could have ended careers. But in the days before such formal organizations existed, one group of warriors was willing to make the ultimate sacrifice; as is often the case, they came from varied backgrounds and had diverse expertise. In *A Perfect Hell*, John Nadler writes about the First Special Service Force (FSSF)—the "Black Devils." Imagine a group of rogues, prize-fighters, farmers, professional soldiers, and so forth, from several Allied countries thrown into the hinterlands of Montana, and you have the makings of a multinational commando team.

This was a force to be reckoned with, one that lost more than 2,777 men to death and injury over time. Such a close-knit group of special young men would not willingly tell their story to outsiders, much less attend reunions or ceremonies honoring their own. That Nadler was able to create this book shows that he possesses a rare talent for persuading such heroes to open up and allow the rest of us to have the honor of knowing their story.

More than a compilation of historical facts and figures, this book allows us to sit down with the survivors and hear their own words. Although not a special operator or warrior like the men in the FSSF, Nadler, who has found himself in harm's way, has managed to re-create their blood, sweat, and tears. These men, all of them handpicked volun-

teers, only knew that their country wanted single men to serve in a “suicide unit.” Thousands responded. By doing so, they created a permanent place for themselves in military history, achieving a kind of immortality.

When the Black Devils descended upon Helena, Montana, the local populace saw them as both items of interest and, over time, as native sons. When they departed for the war, they took with them fond memories and left families behind—many of them never again to see their wives or children, some unborn.

The FSSF saw its first combat action on Monte la Difensa, a military objective that had thwarted the entire US Fifth Army. This first mission, including no more than 600 men, involved taking the high ground—literally. Before relating the battle, Nadler explores the high-level studies proposed by Churchill and other Allied leaders that called for commando forces to confront the conventional forces the Allies would face during the liberation of Europe. Nadler incorporates the thoughts and words of the FSSF members whose lives were affected by the decisions of the supreme powers. Using a myriad of war stories, facts, and maps, the author tells the story well.

Nadler has created a book that should be required reading in the service academies and non-commissioned officer schools, regardless of service branch. Why? Because joint service operations have become the norm. A rarity among the “been there, done that” genre of books, *A Perfect Hell* has pictures that, by themselves, make it worthwhile. They show a side not often seen in commando stories—the faces of the men who were there and the conditions under which they lived. We see the spirit and souls of those brave few who led the way. A very readable book with no discernable historical flaws, *A Perfect Hell* has my highest recommendation.

Jim McClain
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Liaison Pilot by James R. Bryce. Sunflower University Press, 2002, 120 pages, \$10.95.

Flying by visual rules in marginal weather without radios says much about the times and survivors of such a training regimen. During World War II, the US Army Air Forces mobilized for war in Europe, where conditions were even worse. TSgt James R. Bryce flew tiny airplanes, principally the Stinson L-5, during this time. In this brief memoir woven from his wartime letters, pilot log, and vivid

memories, he sets out to tell the reader what a liaison pilot did in the war—and he does a good job.

Bryce engages the reader immediately by his rejection of the fighter-pilot path, a candid self-assessment based on his dislike of the Vultee BT-13 Valiant trainer. His sincerity binds the story, drawing the reader across the country and then the Atlantic.

Operating generally in rear areas, Bryce hauls the mail, couriers, and senior officers, staging from muddy and treacherous pastures. Spotting for the artillery was not a liaison function, but Bryce flies a few reconnaissance missions. Detailed maps allow the reader to follow him and the 72nd Liaison Squadron from Italy across France and into northern Germany by VE-day. Bryce witnesses the horrible consequences of war and survives to face his own mortality.

Bryce could have moved his story faster with more show and less tell. He could have increased its reference value with more specific history and statistical information on the 72nd Liaison Squadron. What was its official mission? How was it tasked? What was its combat record? What became of it? Parts of the book would benefit from a bit more beef. For example, he offers, “I suddenly lost control of the aircraft and crashed into the side of the hill” (p. 42). That little sentence would have filled a colorful chapter in my book.

Overall, *Liaison Pilot* is a worthwhile two-hour read. Its greatest appeal lies in the offer of a candid look back in time. The protagonist is likeable. The story is genuine and unique.

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Forging the Shield: Eisenhower and National Security for the 21st Century edited by Dennis E. Showalter. Imprint Publications (<http://www.imprint-chicago.com>), 207 E. Ohio Street, no. 377, Chicago, Illinois 60611, 2005, 256 pages, \$24.95 (softcover).

From 26 through 28 January 2005, the Dwight D. Eisenhower Memorial Commission and the Industrial College of the Armed Forces at the National Defense University conducted a symposium entitled “Eisenhower and National Security for the 21st Century” at Fort McNair, Washington, DC. That symposium produced *Forging the Shield*, a collection of essays written by a broad-based and internationally recognized group of individuals and edited by Dennis E. Showalter, professor of history at

Colorado College, Colorado Springs, Colorado. According to Showalter, the authors capture the unique nature of the Eisenhower presidency by revealing the fingertip sophistication of Eisenhower as commander in chief as well as his ability to comprehend the complex relationship between national security and the vulnerable infrastructures of modern societies. As a consequence, their efforts enhance our overall understanding of Eisenhower's presidency by highlighting his shortcomings as well as his successes. Ultimately, in Showalter's estimation, this assessment demonstrates that in the 1950s, Eisenhower "was as president the right man in the right spot" (p. 5).

Alex Roland, professor of history at Duke University, focuses on Eisenhower as policy maker in a general discussion about the president's approach to lobbying efforts by scientists, congressmen, businessmen, and officers of the military services or, as the president referred to them, the "military-industrial complex." Roland's essay, "The Grim Paraphernalia: Eisenhower and the Garrison State," sets the stage for three chapters on the administration's efforts to deal with this phenomenon. "Clandestine Victory: Eisenhower and Overhead Reconnaissance in the Cold War" by R. Cargill Hall, chief historian emeritus of the National Reconnaissance Office; "Eisenhower and the NSA: An Introductory Survey" by David A. Hatch, National Security Agency historian; and "The Invisible Hand of the New Look: Eisenhower and the CIA" by Clayton D. Laurie, historian of the Center for the Study of Intelligence, Central Intelligence Agency, provide insightful "must-reading" for Airmen. Hall describes two of the administration's greatest achievements—high-altitude aerial and space reconnaissance of the Soviet Union—and the ways that these twin technologies contributed to the end of the Cold War. Hatch reveals Eisenhower's behind-the-scenes, proactive involvement with communications intelligence and its enhancement of the agency's ability to deliver concise, clear evidence with definitive conclusions. Laurie analyzes the administration's expanded use of paramilitary operations, espionage, and political action as a substitute for larger conventional military forces whose use anywhere risked superpower confrontation and a third, potentially atomic, world war. In offering how similar achievements in the future may contribute to our national security in the twenty-first century, each of these authors combines a solid foundation of Eisenhower's past presidential achievements with a peek at what might be needed in the future. These are essential elements for today's Airmen if they wish to understand their past

while they shape technological and interagency contributions for tomorrow's world.

Roger D. Launius, chair of the Division of Space History at the Smithsonian Institution's National Air and Space Museum, and Capt John W. Yeager, USN, retired, director of institutional research at the Industrial College of the Armed Forces, discuss aspects of Eisenhower's long-term vision. In "Eisenhower and Space: Politics and Ideology in the Construction of the U.S. Civil Space Program," Launius suggests that, more than perhaps any president in the Cold War era, Eisenhower had a formal strategy for defeating the Soviet Union. Consequently, the president's strategic vision did more to establish conditions for success than any other single set of decisions during that 40-year conflict. In what might be called a preemptive strike to prevent a disruption of his strategy, Eisenhower transformed the National Advisory Committee for Aeronautics into the National Aeronautics and Space Administration, defining the agency with a limited mission that never sought to make it the "miracle solution to all current difficulties" that aggressive space advocates wanted (p. 153). Yeager's "Eisenhower and Joint Professional Military Education" explains how the president nurtured a system of professional military education, giving our armed forces an intellectual as well as an operational framework that has endured well after the Cold War. Similarly, University of California professor Gregg Herken's "'Not Enough Bulldozers': Eisenhower and American Nuclear Weapons Policy, 1953–1961" examines yet another aspect of the president's long-term vision. Herken details how Eisenhower and his secretary of state, John Foster Dulles, presided over the most rapid and dramatic growth of America's nuclear arsenal, setting the course for a unique 50-year nuclear weapons policy. During his administration, the nation's nuclear stockpile grew from 1,750 to approximately 23,000 weapons (p. 85). Along with an increase in the number of weapons came dramatic growth in their nominal yield: from the 20-kiloton atomic bombs, the original mainstay of the arsenal, came the multimegaton thermonuclear weapon. Though believing that nuclear war would be an unprecedented catastrophe, the president and his secretary of state recognized the necessity of preparing for all military contingencies, even those they disliked. Staying the course rather than reacting to the whims of change, working in a joint and interagency environment rather than attempting a single-service or single-agency solution, and embracing the many exigencies of a volatile world rather than preparing for only a few are still

sound principles for our nation's future military leadership.

Sergei N. Khrushchev, Senior Fellow at the Thomas J. Watson Jr. Institute for International Studies, provides a unique international understanding of Eisenhower's foreign policy in "Reflections on Eisenhower, the Cold War and My Father." The essays of Saki R. Dockrill, chair, Contemporary History and International Security, Department of War Studies, King's College, University of London; Allan R. Millett, Major General Raymond E. Mason Jr. Professor of Military History, Ohio State University; and Qiang Zhai, professor of history at Auburn University–Montgomery, create a portrait of Eisenhower as international statesman in an era of global crisis and confrontation. Sergei's remembrances of his father's attitudes towards Eisenhower are insightful. Although younger Soviets, like Sergei, might have believed that the election of a general as our president sent a clear signal that the United States was preparing for war, his father, Nikita Khrushchev, did not. To older Soviets, Eisenhower was an honest man beside whom they had fought in World War II. He had not stolen victory from Gen Georgi K. Zhukov when Hitler left the gates to Berlin open to American forces. "We can deal with these people," the older Khrushchev believed (p. 8). Nevertheless, the Soviet Union was not as strong as the United States, and it was his responsibility to conceal that weakness from America. In "Eisenhower's Methodology for Intervention and Its Legacy in Contemporary World Politics," Dockrill discusses Eisenhower's approach to intervention and its outcome, examining the ideas behind the president's grand strategy for the Cold War and the relationship between the perceived threat and the nation's security. Utilizing the competition of ideas and ideology, intelligence gathering, covert operations, and proxy battles in the Third World, Eisenhower's New Look doctrine combined the unity, not the conformity, of the Western alliance with limited mobilization, emphasis on American nuclear deterrence, use of allied ground forces, and "all feasible diplomatic, political, economic and covert operations" to deal with the Soviets (p. 24). In "Eisenhower and the Korean War: Cautionary Tale and Hopeful Precedent," Millett examines how the Korean War fit into Eisenhower's vision of a proper national-security policy in an era of Cold War competition with the Soviets. For Millett, the Korean War serves as an example of the strengths and weaknesses of a security system based on forward, collective, and conventional defense, reinforced by the deterrent influence of nuclear weapons of varied destructive capabilities and delivery systems. De-

spite the fact that no twentieth-century president had taken office (or would take office) with more direct experience in foreign policy, the Korean War illustrated just how little personal influence Eisenhower had on the war's causes, conduct, and consequences. Using recently released American and Chinese documents, Zhai explains in "Crisis and Confrontation: Chinese-American Relations during the Eisenhower Administration" why Beijing viewed the United States as a primary enemy hostile to China's revolution and its unification with Taiwan. In detailing Eisenhower's foreign policy objectives regarding communist China, he highlights the differences between policy makers in Washington and Beijing, specifically showing why Mao Tse-tung and his associates considered America's actions antagonistic. Just as our military and civilian leadership strove to understand other cultures as they struggled to win the Cold War, so must America's current and future leadership strive to understand other cultures if we hope to win the war against terrorism.

As general and president, Eisenhower took great interest in the intellectual development of the officer corps, asserting the importance of both professional military education and advanced education at the best civilian institutions. His remarkable legacy of domestic and international leadership endures within *Forging the Shield*, an important work that Airmen should read and emulate.

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Mavericks of the Sky: The First Daring Pilots of the U.S. Air Mail by Barry Rosenberg and Catherine Macaulay. William Morrow (http://www.harpercollins.com/imprints/index.aspx?imprintid=518003&HCHP=TL_William+Morrow), HarperCollins, 10 East 53rd Street, New York, New York 10022, 2006, 352 pages, \$25.95 (hardcover).

Today we take aviation for granted and think almost nothing of boarding an airplane to fly anywhere on the planet. Yet, the airplane was invented barely a century ago, and many people still alive can recall the sight of a plane overhead as a source of wonderment.

A lively and entertaining book, *Mavericks of the Sky* begins in 1918 when the airplane was a teenager and flight remained almost a magical event. The country had just entered the world war, and aircraft were destined to play an important, highly publicized role. At the same time, farsighted politicians envisioned a dramatic role for aviation in civil affairs.

Postmaster General A. S. Burleson and his deputy, Otto Praeger, believed that aircraft could carry the mail back and forth across the country in a fraction of the time it took to move by train or truck—a tremendous boon for business and the American economy in general. In a move almost breathtaking in its audacity, Burleson and Praeger persuaded a skeptical Pres. Woodrow Wilson, a reluctant Congress, and an unwilling Army to inaugurate airmail service.

The undertaking was audacious because of the extremely primitive state of aviation at the time. Built of wood and fabric, airplanes proved notoriously unreliable, barely able to fly at 100 miles per hour and 10,000 feet. Cockpit instrumentation was virtually nonexistent, with usually only an airspeed indicator, altimeter, and whiskey compass available. As yet, no provisions existed for flying in clouds, rain, or even at night, other than using the unreliable senses of the pilots themselves. Reading this account, one wonders how any of the early aviators survived. Praeger, the flawed hero of this story, had never flown but was adamant that airmail would be a success, despite the obstacles of weather and technology. His stubbornness not only would cause resentment and more than a few deaths, but also would provide results.

Rosenberg and Macaulay fill their account with stories of pilots who possessed more courage than common sense, launching off into the clouds with no clue as to when, if ever, they would break into the open. They flew in rain and snow, at night, and in the fog with nary a navigation aid or even the rudiments of an airway structure to guide them. There were no beacons, runway lights, weather stations, radios, or even aeronautical charts to ease the process. No sane pilot today would even consider flying in the conditions the early airmail pilots encountered daily. Their stoicism in the face of adversity was legendary. After one crash landing that the pilot, Dean Smith, walked away from, he wired headquarters: "Flying low. Engine quit. Only place to land on cow. Killed cow. Wrecked plane. Scared me. Smith" (p. 228).

Because the country was at war in Europe, the Army hesitated to spend its scarce aviation resources on flying the mail, yet when airmail service began on 15 May 1918, a US Army pilot climbed into a military plane—a Curtiss "Jenny"—and took off from Washington, DC, with a sack of mail, heading to New York. The military flew the mail for three months before handing the task over to civilians who worked for the US Post Office.

The US Air Mail Service flew from 1918 to September 1927. At that point, the Coolidge adminis-

tration turned the job over to the emerging airline industry. During the previous nine years, airmail pilots flew nearly 14 million miles, crashed 200 airplanes, and suffered 43 fatalities. Although costly, by 1927 airmail had become an established reality.

An enjoyable read, *Mavericks of the Sky* is largely accurate in a general sense. Unfortunately, the authors seem unfamiliar with many details regarding early flight, especially the military variety, and make a number of errors. The Wright brothers tested the first military airplane at Fort Myer, not College Park (p. 105); Billy Mitchell was not the "commander of U.S. Air Forces in Europe" (p. 75); Maj Carl Spatz had not yet changed the spelling of his name in 1918 (p. 75); the Liberty engine was not "the biggest, most powerful piece of hardware ever strapped into a wood and canvas biplane" (p. 1); no one could ever term Eddie Rickenbacker "baby-faced" (p. 86); and neither the de Havilland DH-4 nor the Junkers JL-6 were multiengine aircraft (pp. 226, 233). These avoidable gaffes aside, the authors have written a good yarn about a little-known part of early aviation.

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Powerful and Brutal Weapons: Nixon, Kissinger, and the Easter Offensive by Stephen P. Randolph. Harvard University Press (<http://www.hup.harvard.edu>), 79 Garden Street, Cambridge, Massachusetts 02138, 2007, 416 pages, \$29.95 (hardcover).

In past issues of this journal, I thought I had recommended to prospective air warriors all they would ever need in books on the air war in Vietnam. I had told them about Marshall Michel's two studies: *Clashes: Air Combat over North Vietnam, 1965–1972* (Naval Institute Press, 1997) and *The Eleven Days of Christmas: America's Last Vietnam Battle* (Encounter Books, 2002). I had also recommended Wayne Thompson's *To Hanoi and Back: The U.S. Air Force and North Vietnam, 1966–1973* (Smithsonian Institution Press, 2000). None of those three said much about the tactical air war in South Vietnam, covering the air battles over the North instead. The air war in the South is well handled in John Schlight's *The War in South Vietnam: The Years of the Offensive, 1965–1968* (Office of Air Force History, 1988). But now I must add one more splendid work to that impressive array: Col Stephen Randolph's *Powerful and Brutal Weapons*.

Starting in 1974, Randolph served 25 years in the Air Force before he retired, flying F-4s and F-15s

as well as participating in Operation Desert Storm. That experience and the fact that he is a splendid writer qualified him well for his assignment on the Joint Staff. He is now a civilian faculty member at the Industrial College of the Armed Forces, Fort Lesley J. McNair, Washington, DC, teaching subjects having to do with strategy and space. The Developing Air Leaders Initiative some years ago was commissioned to address a shortage of senior officers who had not only a firm grasp of their technical/tactical specialties but also a broad knowledge of politics and culture. At the time, Randolph seemed to have been at least one officer who fit that prescription.

The beauty of *Powerful and Brutal Weapons* is that it seamlessly melds the domestic, political, diplomatic, cultural, technical, tactical, and strategic factors affecting the air war in 1972. Meticulously researched, it depends heavily on primary sources from all sides of the fight—American, North and South Vietnamese, Soviet, and Chinese. Randolph uses a chronological organizing scheme, starting with the Easter Offensive in the South and moving on to the mounting of Linebacker One.

The book yields a fine illustration of the notion that strategy making is a two-way street dealing with a thinking, reacting, and intelligent enemy. It also shows some of the difficulties involved in civil-military relations, especially the interplay between politics and military action while negotiations to end the war continued in Paris. Randolph deals with tensions between the Washington leadership's desire to bring heavy pressure to bear on Vietnamese leaders in the North and military requirements of the close-run ground battles in the South. He does not glorify the fighter effort, giving due credit to the role of the gunship and airlift crews who lost their lives in the successful defensive battles in Military Region III. He avoids the common traps of trying either to condemn the American effort or to duck the blame for frustrations of the war in 1972. He gives due credit to the work of the naval aviators up north. To Randolph, airpower was neither omnipotent nor valueless in affecting decision making in Hanoi. Along with the successful diplomacy involved in the opening of China and the conclusion of Strategic Arms Limitation Talks I with Moscow, airpower *was* among the deciding factors in bringing an end to the war and limiting our humiliation there.

We now have great literature on the air war in Vietnam. *Powerful and Brutal Weapons* is one of the best air-campaign studies—if not *the best* study—available. Readers who can accommodate only one

book on air war this year should make it Randolph's fine work.

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From POW to Blue Angel: The Story of Commander

Dusty Rhodes by Jim Armstrong. University of Oklahoma Press (<http://www.oupres.com>), 2800 Venture Drive, Norman, Oklahoma 73069-8216, 2006, 317 pages, \$29.95 (hardcover).

Jim Armstrong's *From POW to Blue Angel* is a page-turner that reinforces the cliché "truth is often more compelling than fiction." Dusty Rhodes could have been the Forrest Gump of Navy air in his generation, for he seemed present at every important event in naval aviation and seemed to have done everything of historical interest. Certainly, there were plenty of exceptional occurrences in his life, but none of them really qualify as noteworthy. Rather, we are struck by the entire span of his military life: what he saw, what he did, whom he served with, and how he handled it all with great courage, grace, persistence, and good humor.

An Eagle Scout and all-American boy, Rhodes joined the young American Navy aviators who rushed to the Pacific to join the fight against the most well-trained and advanced navy in the history of the world—one whose air arm had just sunk most of the US Pacific Battle Fleet at Pearl Harbor. His unforgettable baptism of fire occurred during the Battle of Santa Cruz Island on 26 October 1942. This classic Pacific sea battle was only the second major combat engagement in the history of navy warfare in which opposing surface forces never saw one another—aircraft on both sides accounted for all of the strike power. Early in his fleet-aviation experience, Rhodes bonded with the Who's Who of wartime naval aviation: aces Swede Vejtasa, Butch Voris, and Butch O'Hare; great aviation leaders Jimmy Thatch and Tommy Flatly; and more—all icons of aviation and the war in the Pacific. He also recounts meeting the brilliant Japanese fleet admiral Isoroku Yamamoto. Through his unblinking personal insight, we come to know these interesting and ultimately famous people.

Are there lessons here for today's military members? Absolutely. Armstrong has written a wonderful human-interest story about real people from the "Greatest Generation"—a special man, his peers, and family at a special time and place in our nation's history. It is also an eminently military story of backbone, persistence, and optimism in the face

of devastating enemy attacks, brutal adversity in captivity, personal setbacks in a war-strained marriage, professional challenge in a new era of aviation, and resurrection among his peers through hard work and dedication.

The book's human aspect sets it apart. The themes are timeless, and the details are riveting. A talented young man sets off to war and glory but encounters a ruthless reality check in his first hectic combat experience. Surviving that encounter, he maintains his dignity during a dehumanizing tenure as a prisoner of war in the enemy camp, shares eyewitness accounts of the Allies' Tokyo bombing campaign, and experiences the touching intimacies of men thrown together in a humiliating internment. Ultimately, he perseveres and after struggling with postwar realities, both professional and personal, he triumphs.

From POW to Blue Angel relates the experiences of a participant in one of our nation's most interesting and challenging periods—and does so in a very personal way. Much more than the story of one man's triumphs in aviation, it is a fascinating account of one of the key turning points in the history of modern warfare. Read this book. You will enjoy it.

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300 días en Afganistan by Natalia Aguirre Zimerman.
 Editorial Anagrama, S.A. (<http://www.anagrama-ed.es>), Pedro de la Creu, 58, 08034 Barcelona, Spain, 2006, 192 pages, \$15.00.

Why would military professionals read a Colombian gynecologist's account of her service in Afghanistan as a member of Médecins Sans Frontières (MSF) (Doctors without Borders)? One reason is that MSF and other nongovernmental organizations (NGO) are an important part of the operational environment. The author, Dr. Natalia Aguirre, is not the stereotypical Birkenstock-sandaled NGO member that some military members might envision. Instead she is an articulate medical professional who genuinely wants to help people. A native of Medellín, Colombia, she is no stranger to violent insurgencies, so she adapted well to post-Taliban Afghanistan, where she operated childbirth clinics. Dr. Aguirre did not set out to write a book, but her messages to friends back home during her nearly yearlong stay in Kabul from 2002 to 2003 grew into such a gripping anthology of daily vignettes that a publisher decided to turn them into a book.

An e-mail epistolary written in Spanish, *300 días en Afganistan* bristles with harrowing tales of childbirth but consists mostly of brief commentaries about clothing, shopping, food, weather, weddings, and other aspects of daily life. These skillfully written diary entries tease out fascinating deeper meanings in mundane events. A perceptive observer, Dr. Aguirre clearly has a sense of adventure. Her accounts of a vacation in Iran and trips into the Afghan countryside are fascinating. She scatters antimilitary quips throughout the text, but the most egregious one comes from the editor's prologue, which indulges in political sermonizing and gratuitous slams against President Bush. The author clearly disapproves of the Iraq war, which began during her stay in Afghanistan, referring to "the clumsy Bush" (p. 74) and dismissively noting that "the military is now quite taken with the idea of posing as humanitarians and handing out two or three blankets so they can take photos and make the world think they are helping a lot" (p. 74). On the other hand, Dr. Aguirre makes humorous references to the hygiene habits of her French MSF coworkers, concluding that "the French are quite pretentious and arrogant" (p. 29). However, the author displays less judgment by characterizing the Taliban as "a phenomenon born of political chaos, but that grew only because it was fed by American and European economic interests" (p. 52).

The book presents conflicting assessments, both of women's role in Afghan society and of the author's attitude towards the military. Dr. Aguirre understandably dwells on the plight of Afghan women, who suffer the world's highest death rate during childbirth. She praises their strength and contends they are less oppressed than Western news media say (pp. 51–53), yet she also relates the systematic domestic abuse they suffer. One chapter describes how a mother of several daughters was threatened with divorce if she did not produce a son (pp. 140–44). Some readers may become frustrated by Dr. Aguirre's ambivalent attitude towards the military. Despite her opposition to Operation Iraqi Freedom, she realized that Saddam Hussein's defeat might permit greater MSF access to Iraq, enabling that organization to expand its humanitarian mission. Her views of the war in Afghanistan are equally contradictory. Dr. Aguirre strongly criticizes the Taliban and tells how some of its members nearly killed one of her female nurses for attending school (pp. 99–101), yet she shows little regard for the military forces that overthrew the Taliban. Her comments suggest that NGOs value some services the military can provide yet are careful not to associate too closely with it. Some of the book's contradictions

may derive from its origin as a series of e-mails chronicling the vicissitudes of the author's life, but they also reflect the sometimes uneasy military-NGO partnership.

Readers seeking military lessons learned will find none in *300 dias en Afganistan*, but the book opens a window into the mind-set of NGO members. The author's Colombian background gives US and European readers a noticeably different perspective on events they hear about every day. Dr. Aguirre's witty and sometimes irreverent prose makes her book refreshingly readable.

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Afghanistan and the Troubled Future of Unconventional Warfare by Hy S. Rothstein. Naval Institute Press (<http://www.usni.org/press/press.html>), 291 Wood Road, Annapolis, Maryland 21402, 2006, 224 pages, \$26.95 (hardcover).

The initial phase of the US military campaign in Afghanistan received praise as a formidable display of American military prowess, especially the role of US special forces in ousting the Taliban regime and pursuing members of al-Qaeda into their own backyard. American civilian and military leaders alike have issued repeated statements insisting on the importance of unconventional capabilities in fighting a war against terrorists. Yet today in the Middle East, increasing numbers of coalition forces continue to battle a persistent enemy. Have operations in Afghanistan actually been unconventional, or have we used special operations forces (SOF) simply to conduct what in essence remains a conventional campaign?

Afghanistan and the Troubled Future of Unconventional Warfare is a study of what defines unconventional warfare and how we must posture SOF in order to engage irregular threats successfully. The title of the book speaks directly to its purpose: to highlight the inability of the US military to conduct unconventional warfare effectively. Using operations in Afghanistan as a contemporary case study, author Hy Rothstein examines how the American military has historically waged war and how it cannot help using conventional methods to fight in the future. Framing his study in a conceptual discussion of what constitutes unconventional warfare, the author explains why our military finds itself ill equipped to fight such a conflict. He argues that despite significant investment in developing special operations, the military lacks the institutional capa-

bility of engaging opponents with irregular methods. Employing SOF in a mission does not automatically constitute a special operation. Initial operations in Afghanistan rightfully consisted of using conventional means to defeat a conventional opponent. Since the fall of the Taliban regime, however, the conflict has become unconventional, while US actions in the region have remained conventional.

A retired career special-forces officer with 30 years' active duty, Rothstein writes from a perspective of experience. His concise prose punctuates each point of the book, and he personalizes the case study of the conflict in Afghanistan through extensive interviews with members of specific units and with leaders who directed the employment of those units. The author's concise, well-documented review of the literature, which defines the context of special operations and the arena of unconventional warfare, transforms several vague definitions into clear terminology. Gradually developed on a foundation of contemporary history and theoretical analysis, the author's insights into the current state of US capabilities in unconventional warfare present an efficiently constructed volume that reflects Rothstein's provocative thought.

For the reader who has but a few minutes to spare, the book's introduction, which reads much like an executive summary, explains the author's main points quite well. Yet the true value of the book lies in its examination of the American military system and how that system's structure resists the concepts of unconventional warfare. In presenting the fundamentals of organizational theory and dependency relationships, the author identifies the self-reinforcing nature of contemporary military organizations and the way they further promulgate their established procedures. At times the many lists, intended to define unconventional warfare, seem only to obscure a basic definition, but perhaps that is really the point: to realize that because unconventional warfare in fact defies the limits of an organizational structure, one must conduct it through an outward perspective that allows continuous adjustment to the environment in which it occurs.

As an analytical tool that frames a view of what constitutes unconventional warfare and the way one should use SOF to combat irregular threats, *Afghanistan and the Troubled Future of Unconventional Warfare* represents a valuable reference to the contemporary military professional fighting the global war on terrorism. For the astute reader, Rothstein's use of Afghanistan as a case study to illustrate his arguments also provides insight into the insurgency in Iraq. By conducting a far-reaching analysis of SOF in particular and unconventional warfare as a

whole, the book offers innovative insight into how the US military conducts war. Nevertheless, readers looking for easy answers should beware: the author's recommendations are as unconventional as the type of warfare he seeks to define.

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The Spectacle of Flight: Aviation and the Western Imagination, 1920–1950 by Robert Wohl. Yale University Press (<http://www.yale.edu/yup>), P.O. Box 209040, New Haven, Connecticut 06520-9040, 2005, 376 pages, \$39.95 (hardcover).

Air travel—and air warfare—are commonplace today. Military airpower has moved beyond the widespread devastation that marked its use in the Second World War, civil air travel long ago lost much of the excitement and glamour once associated with it, and millions trudge through sprawling airport/shopping complexes as part of their normal routine. It is therefore quite easy to overlook the fascination aviation once inspired in Europe and the United States as well as the great changes wrought across the world by powered flight. In his superb book *Spectacle of Flight*, Robert Wohl reminds us of that time when airplanes and aviation represented the dawning of a new age in human civilization: “No other machine seemed to represent as fully humankind’s determination to escape from age-old limitations, to defy the power of gravity, and to obliterate the tyranny of time and space” (pp. 1–2).

Spectacle of Flight is an engaging and richly illustrated cultural history of powered flight during three critical decades in the development of both civil and military aviation. Wohl is well qualified to write on the subject. Distinguished Professor of History at the University of California at Los Angeles, he also served as Lindbergh Professor at the National Air and Space Museum and currently teaches European intellectual and cultural history. Wohl set out to write a one-volume cultural history of aviation. The subject proved so rich that what he originally conceived as an introduction became his first book on the subject—*A Passion for Wings: Aviation and the Western Imagination, 1908–1918* (New Haven, CT: Yale University Press, 1994). In the volume under review, Wohl considers the cultural history of flight during a period when, in his words, the airplane was “a magical contrivance that had little to do with most people’s everyday lives” (p. 4).

Readers should not consider this book a history of airpower, and Wohl also notes that his work is not a soup-to-nuts survey of the cultural history of aviation. He builds his narrative around key themes and personalities, however, and in so doing, provides a comprehensive account of aviation throughout the period from 1920 to 1950. Readers will recognize many of the historical figures whom Wohl weaves into his narrative, while other characters are likely known only to historians of the period. The author mentions Billy Mitchell, for example, just in passing while the Italian nationalist, poet, and adventurer—and Fascist icon—Gabriele D’Annunzio receives a rather thorough treatment.

Wohl masterfully synthesizes cultural and political history with the history of technology in providing a fascinating and insightful account of Benito Mussolini’s harnessing of the “spectacle of flight” to the Italian brand of Fascism. Mussolini sought to reclaim Rome’s imperial heritage for Italy and place that nation among the ranks of the world’s great powers. In light of the Italian Air Force’s lackluster military performance in the Second World War, the reader will find Wohl’s engaging and detailed account of Italian air marshal Italo Balbo’s record-setting transatlantic flights to Brazil and the United States, for example, especially surprising and illuminating. Though the Italian aviation industry could not keep pace with that of other major powers when war eventually broke out, Italy’s Fascist ideology nevertheless embraced the traits and ideals perceived in aviation and aviators. Thus, Mussolini, himself a pilot (though not an exceptionally good one), more than any other leader of the period, made aviation “both an indispensable instrument and a resplendent manifestation” (p. 106) of the “glory” of his regime and nation. This was aviation’s ultimate cultural impact.

Many of the studies of aviation during this period focus on the technical aspects of aircraft development or on the broad debate over the proper role of aircraft and air forces in warfare. *Spectacle of Flight* takes its place alongside works such as Joseph J. Corn’s *The Winged Gospel: America’s Romance with Aviation* (New York: Oxford University Press, 1983) and *The Airplane in American Culture* (Ann Arbor: University of Michigan Press, 2003), edited by Dominick Pisano. Wohl moves his narrative beyond the more well-known accounts of military events and technological progress, convincingly demonstrating that the spectacle of flight became firmly ingrained in the popular cultures of America and Western Europe by the eve of the Second World War. In doing so, he moves seamlessly from one element of his narrative to the next. For example,

Wohl thoughtfully analyzes the relationship between cinema and literature on the one hand and aviation on the other. Indeed, in Wohl's view, filmmaking and flying "both aimed at nothing less than the liberation of humankind from the constraints of everyday reality, and both were forms of escape" (p. 112).

Yet, the West's fascination with aviation also produced some unwelcome results. Wohl demonstrates that the awe with which Western publics viewed aviation in the 1930s allowed Hitler's regime to coerce its opponents with the mere threat of aerial attack. While Giulio Douhet's predictions of civil collapse under air attack never materialized, the massive destruction of the air campaigns of the Second World War and the technological advances that made those campaigns possible transformed warfare and human civilizations forever. Wohl concludes that in the aftermath of the war and the decades that have passed since then, "aviation may not have lost its appeal and meaning as a form of adventure for a privileged few [but it has lost the] ability to transform men and women and raise them above themselves" (p. 322).

To say as well that the book is lavishly illustrated might mislead the reader into thinking that this is not a serious work of scholarship; nothing could be further from the truth. The photographs and illustrations complement the author's discussion of aviation's impact on movies, literature, art, and popular culture. Crafted in a style and manner that will attract the casual reader, *Spectacle of Flight* is also the product of extensive research. This fine book will appeal to cultural, intellectual, and social historians as well as those who study military and aviation history. *Spectacle of Flight* belongs on every Airman's reading list.

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Securing America's Future: National Strategy in the Information Age by Daniel M. Gerstein. Praeger (<http://www.greenwood.com/praege.aspx>), 88 Post Road West, Westport, Connecticut 06881, 2005, 288 pages, \$44.95 (hardcover).

Daniel M. Gerstein's *Securing America's Future* presents a compelling argument for redesigning the country's national security strategy to better fit the needs of society in the information age. The core thesis, "elements of power other than the traditional or hard power political-military-intelligence components . . . must become coequal partners in

the national security process" (p. 3), calls for more balanced treatment of national security across the 11 elements of power that he discusses. Colonel Gerstein contends that America still clings to vestiges of policies developed in the industrial age. However, because the country is transitioning to the information age, it must gear both the domestic and foreign-policy engines accordingly.

While addressing complex political concepts and strategies, the author also explains each element of power and the historical perspective behind the United States' current geopolitical position as a "hyperpower." The introduction claims that the text is divided into two parts, but there are actually three. The first describes America's current status, the second defines traditional elements of power, and the third critiques the government's existing direction for national security in the twenty-first century.

Gerstein does an exceptional job of drawing readers in by opening his analysis with three fictional scenarios, each presenting either a domestic or international threat to US national security. The stories prime the mind and highlight the well-supported opinion that current policies indeed derive from a bygone age. Next, the author dedicates a good portion of the book to backstory and historical perspective, which not only serves as a review for avid amateur historians or political scientists, but also offers invaluable information to readers uninitiated in global politics and grand strategy. The supporting data is extensively researched and packed with figures (the appendices are virtual treasure troves of data and bibliographic bread crumbs).

The book's real force comes from the last half of the argument, which plainly outlines Gerstein's proposed way ahead, including a very insightful and arguably accurate assessment of America's strategic need. The government must use all of its symmetric and asymmetric resources to survive and effectively counter future threats from other states or nongovernment actors. The author promotes using "soft" elements of power to shore up the more traditional "hard" powers of the Department of Defense, the former including science and technology, economics, culture, human rights, education, and, most importantly, information. Critics argue that the United States already leverages these powers globally. The more subtle point is not *if* America uses the soft powers but *if* it uses them effectively. Gerstein clearly depicts an image of bureaucracies that consistently fail to communicate and issues a plea to regain efficiency as well as integrate, coordi-

nate, and synchronize across the spectrum of government agencies and the “tools of state.”

Securing America's Future—carefully researched and complex, yet aimed at a general audience—reinvigorates the concept that an organization should always strive to use every asset at its disposal to obtain its objectives. Daniel Gerstein calls for changes in national security strategy that will allow the United States to harness all the elements of power and aggressively meet the new demands of the information age. Both novice and expert can use this book as a catalyst for dialogue and as a foundation for further research.

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Battle-Wise: Seeking Time-Information Superiority in Networked Warfare by David C. Gompert, Irving Lachow, and Justin Perkins. Center for Technology and National Security Policy (<http://www.ndu.edu/CTNSP/contact.html>), National Defense University, 300 5th Avenue SW, Fort Lesley J. McNair, Washington, DC 20319, 2006, 174 pages, \$15.00 (softcover). Available online at http://www.ndu.edu/CTNSP/pubs/B-W_BOOK.pdf.

Just as the airplane dramatically changed warfare, so now will information technology. The ability to integrate forces and provide limitless information to the war fighter will forever change how we think and how we fight. But according to Linton Wells II, principal deputy assistant secretary of defense for networks and information integrations, “To realize the revolutionary potential of the network, several factors need to evolve together. These include doctrine, organization, training, material, leadership, personnel, and facilities” (p. 165). Although most of the current focus is on the technology of network-centric warfare, an aspect that will improve as technology evolves, *Battle-Wise* concentrates on the integral foundations of network-centric warfare, doctrine, training, and people, which will revolutionize the way we fight.

Because all of our current potential adversaries already use networking information, the authors make the novel assertion that, to stay ahead, we must realize that the key is not technology but the cognitive capabilities of the people who use it: “Improving decisionmaking—creating battle-wise superiority—deserves attention not as a peripheral detail or afterthought of networked warfare but as its ultimate differentiator” (p. 85). From this prem-

ise, the core of the book clearly communicates innovative ways for recruiting, training, and retaining these battlewise individuals while also defining their use in combat. Some of the authors’ original ideas include recruiting proven, battlewise civilian professionals in such critical areas as security forces and allowing them to enter at higher ranks; developing new training methods to improve critical decision-making skills under fire; and increasing the retention of battlewise personnel by increasing incentives to more closely match those of civilian corporations. Finally, the authors break new ground by placing lower-level leadership rather than higher-level leaders, such as members of a joint air operations center, at the center of the networked battlespace. Upper-echelon leadership still has access to the information and can provide guidance, but lower-level leaders have responsibility for “pulling” information from the network and making decisions when the time arises—they too must be battlewise.

Authors David Gompert, Irving Lachow, and Justin Perkins bring great credibility to the subject. Mr. Gompert, distinguished research professor at National Defense University (NDU), has held several senior policy positions at the State Department, National Security Council, and the RAND Corporation. Dr. Lachow, senior research professor at NDU, has extensive experience in both technology and defense issues. Mr. Perkins, research associate at NDU, previously served as chief operating officer for World Blu, Inc., a national consulting firm. A foreword by Rear Adm Raymond C. Smith, USN, retired, and an afterword by Linton Wells II provide perspective from senior leaders and put power behind the landmark ideas described in this book.

An outstanding, well-written study that will set a new standard for how we look at networked combat, *Battle-Wise* offers a carefully considered framework for preparing ourselves for this next revolution in combat. We should consider adopting the authors’ innovative, timely ideas as we further define the concept of operations and implementation strategies of network-centric warfare.

Maj David Benson, USAF

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Blazing the Trail: The Early History of Spacecraft and Rocketry by Mike Gruntman. American Institute of Aeronautics and Astronautics (<http://www.aiaa.org/content.cfm?pageid=2>), 1801 Alexander Bell Drive, Suite 500, Reston, Virginia 20191-4344, 2004, 475 pages, \$59.95 (hardcover)

As a certified space professional with over 20 years' experience in space operations and engineering, I've never seen such a detailed record of the world history of rocketry and spacecraft. In the 18 chapters of *Blazing the Trail*, Mike Gruntman covers the "humble beginnings" to the "first thousand years" and provides a thorough description of the "long road that led us from simple fireworks to intercontinental ballistic missiles and powerful space launchers that open the ways to the cosmos" (p. 455). He also discusses the infrastructure required to support the development and testing of rockets and spacecraft, including the building of test and launch sites. Gruntman combines a heavy dose of engineering details with some political insights and sprinkles of humor to produce a well-written space-reference book.

Although it provides encyclopedia-type detail, overall, *Blazing the Trail* is easy to read and well formatted. However, since the term *spacecraft* comes first in the title, I expected more history on spacecraft than on rocketry. Just the opposite is true—about 70 percent on rockets and 30 percent on spacecraft. The first detailed discussion on spacecraft occurs in chapter 15, "The Breakthrough," after over 300 pages on rocketry. Nevertheless, Gruntman interweaves technical and engineering facts, such as the size and performance of early rockets, with some key political factors behind both their successes and failures. For example, in chapter 16, "Opening the Skies," the author outlines in detail the geopolitical environment and factors leading to development of the United States' first reconnaissance satellite and formation of the National Reconnaissance Office. Additionally, the book contains over 300 figures, helping to bring the words to life and providing a unique perspective of the faces and places instrumental in "building the foundation" of future systems. The pictures of early systems make it easier to visualize how early rockets and spacecraft evolved from the fairly simple to the extremely complex. Given the extensive number of illustrations, I was surprised that the book does not include a "Table of Figures" to support quick reference and research. However, the frequent sidebars do help in this regard.

Although not outlined as clearly and consistently as the history of spacecraft and rockets, the book offers a unique discussion of the heritage of many US space corporations. For example, Gruntman cites how disagreements with Howard Hughes led to the resignation of two leading specialists (Simon Ramo and Dean Wooldridge [Ramo-Wooldridge]) and, with financial help from Thompson Products, eventually to the formation of Thompson Ramo

Wooldridge (TRW) (p. 233). The author also covers the "why" behind the formation of Aerospace Corporation as a nonprofit institution to help the US Air Force make advances in ballistic-missile and military-space systems (p. 233).

Gruntman spices up the book with "engineering humor." For example, in discussing the development of one satellite, he notes how a specially produced, expensive white paint was "required" for thermal control. However, it turns out that a common household paint was used by mistake. Nevertheless, the thermal control worked as required, offering an early lesson in cost control (p. 427).

Fundamental courses in space operations and extended research projects on rocketry and/or spacecraft should acquire this well-written, single-source "encyclopedia" as a must-use reference. Also, *Blazing the Trail* is definitely a must-read for all military and/or space-history enthusiasts.

Lt Col Kenneth Allison, USAF

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The Cambodian Campaign: The 1970 Offensive and America's Vietnam War by John M. Shaw. University Press of Kansas (<http://www.kansaspress.ku.edu>), 2502 Westbrooke Circle, Lawrence, Kansas 66045-4444, 2005, 352 pages, \$34.95 (hardcover).

In describing his greatest victory, Field Marshal His Grace the Duke of Wellington called the Battle of Waterloo "the nearest run thing you ever saw in your life." In an impressive debut work, John M. Shaw has produced a study suggesting that Wellington's quotation is far more descriptive of the American experience in Southeast Asia than most people might think. Prior coverage of the American invasion of Cambodia has focused on the political ramifications of this campaign. In an account that emphasizes the operational level, Shaw accepts Richard Nixon's argument that the move into Cambodia was the most successful operation of the war: "While historians debate the political fallout of the Cambodian incursion, there can be no doubt of the military consequences. At a comparatively light cost in friendly casualties, the incursion crippled Hanoi's principal forward stockpiles along South Vietnam's borders" (p. 169). As a result, the balance of power shifted towards Saigon in the early 1970s.

A now-retired US Army lieutenant colonel with a PhD in history who has taught at both the US Military Academy and Air Force Academy, Shaw

brings a good deal of military and academic expertise to bear in this account. He bases his findings on an impressive and extensive examination of American military records, showing that by 1970 the Americans had essentially defeated the Vietcong and that the North Vietnamese Army posed the most direct threat to the Saigon government, with bases less than 100 miles away. The North Vietnamese, though, were vulnerable to attack after having operated out in the open for so long in Cambodia. The Army of the Republic of Vietnam gave an adequate showing in the invasion. Americans performed well and were hardly a military falling apart from political dissension at home, poor leadership, and heavy drug use among its troops. Shaw, though, is quick to show that the US Army had clearly declined in quality from its first days in Vietnam. These findings in and of themselves are provocative, much less his claim that the operation was an enormous success. What is particularly impressive about this book is how even small features—such as the photo section—support its overall focus.

Cambodian Campaign is also well written and has already won the Army Historical Foundation's Distinguished Writing Award. Shaw conducted a number of interviews for this project, and he uses quotations in an effective fashion to enliven his narrative. The text, though, is littered with military acronyms, but that will hardly be a problem to readers of this journal.

This book will not be the last word on the offensive into Cambodia. There are a number of topics that Shaw does not address at length, such as the perspective of individual soldiers at the tactical level or what Wellington called "the other side of the hill." But if one stops to compare the state of the literature on war 40 years after the fact to a comparable stage of two other big conflicts—the Civil War and World War II—it seems likely that this book will remain the authoritative account of US actions at the operational level for decades to come.

Should military officers read *Cambodian Campaign*? Yes. In fact, it should end up on reading lists at various schools in the professional military education system. Shaw has produced a study that highlights a troublesome fact about military operations in Vietnam and many other wars: operational success does not always bring with it strategic victory. It is altogether possible for soldiers, sailors, marines, and airmen to achieve their objectives and for that to mean nothing in the end.

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And Nothing Is Said: Wartime Letters, August 5, 1943–April 21, 1945 by Michael N. Ingrisano Jr. Sunflower University Press, 2002, 540 pages, \$22.95 (softcover).

The title of Michael Ingrisano's book—*And Nothing Is Said*—is misleading. In fact, he had a lot to say to his fiancée, Bettejeane Louise Hill, while he served with the Army Air Corps in the European theater during World War II. Between 5 August 1943 and 21 April 1945, "Mike" sent "Bette" 343 letters that recounted his daily routine (minus operational details), expounded on a variety of topics from books to a wife's place in the workforce, and voiced hopes for their future together. The book collects these letters, discovered after Bette's passing in 1985. Unfortunately, the other half of the conversation is missing since Bette's letters to Mike never made it back from the war.

The Ingrisanos' story resembles accounts told by many other members of their generation. A native of Brooklyn, New York, Mike graduated from high school in 1942 and then took a job with Sears, Roebuck, and Company until September of that same year, when he left to enlist in the Army Air Forces. Bette grew up in Kansas and attended a year of college in Kansas City before leaving to go to work. The two met while Mike was attending advanced radio/mechanic training in Kansas City. By the time he finished, he knew that Bette would play an important role in his life. But after parting in Kansas City, except for a brief visit before Mike left for Europe, they wouldn't see each other again for almost two years. For the next 21 months, he flew as a C-47 crew member with the 316th Troop Carrier Group stationed in Egypt, North Africa, Sicily, Italy, and England, receiving an honorable discharge exactly three years after the date of his enlistment—a proven combat veteran with nine Battle Stars.

A touching account, *And Nothing Is Said* succeeds on one level but disappoints on another. The book does well in providing some insight into one early Airman's war experiences. Though mission details, by necessity, are limited, the reader can still gather from Ingrisano's letters a sense of the operational tempo and emotional toll that the dangerous flights had on crews. To provide some context, he inserts entries from the squadron's war diary between the letters (both the diary excerpts and the letters are largely unedited). Although these entries fill in some detail, their abbreviated descriptions of events still deny the reader a complete picture.

Readers looking for a riveting account of an Airman's journey through World War II should look elsewhere. Despite the wealth of material con-

tained in Ingrisano's trove of letters, the book fails to tell a story. As a lover of biographies, this reader is committed to the belief that everyone has a story to tell. Ingrisano obviously does, and one finds hints of it in both the introduction and epilogue. In between, however, the letters are too disjointed and full of personal sentiments to render a captivating narrative thread.

The book's setting contains all the elements of a great tale—interesting characters, compelling action, and deep emotion—but they lie buried within the dense and personal love letters. The many nuggets—an allusion to a harrowing mission or a thoughtful description of a fellow Airman—make the reader wish Ingrisano had deviated from the book's format to provide a fuller account of an event or a person. He adds a few lines of explanation in places, but, more often than not, intriguing references are brief and fleeting, while the letters repeat feelings of longing, declarations of love, and speculation about his and Bette's future together. Certainly, these sentiments are reasonable, just, and the stuff that gave many service members the strength to make it through the war, but most are best left for private reflection—not publication.

Nonetheless, for those who enjoy the history of the World War II era, a number of the letters contain interesting observations on popular fiction, movies, and controversial social issues of the day. Ingrisano offers captivating "everyman" commentary on a culture and events that are now fixed in history but, for him, were part of an unfolding world: "Say, Honey, I meant to ask you about this Sinatra rage that we hear so much about" (p. 180). "We attended a formal review and Gen. 'Ike' Eisenhower decorated a few of the boys that are closely attached to us. He is a rather nice chap. He went thru the ranks and talked to a lot of the boys. . . . I saw Ike's Scottie—he has 4 stars on his collar just like his boss" (p. 260). For this reader, observations such as these provide some of the most enjoyable moments in the book.

In the end, Mike and Bette have evolved into fuller characters, but the reader is still left with a sense of incompleteness. What did they finally do with the oft-mentioned bottle of Seagram's whiskey that Bette lovingly kept safe until Mike's return? What happened to "Harry," Mike's future brother-in-law and seemingly top-notch fellow who also served in the war? What was the rest of the story behind a teaser in the epilogue concerning a "black ball" from the University of Kansas? *And Nothing Is Said* provides an incomplete snapshot of what was surely a rich life, full of worthwhile stories. But they remain untold here, which is a shame. Perhaps

some day Ingrisano will write a book about his life. If he does, it will be a pleasure to read.

Lt Col Kristine E. Blackwell, USAF

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Buffaloes over Singapore: RAF, RAAF, RNZAF and Dutch Brewster Fighters in Action over Malaya and the East Indies, 1941–1942 by Brian Cull with Paul Sortehaug and Mark Haselden. Grub Street/the Basement, 10 Chivalry Road, London, SW11 1HT, United Kingdom, 2003, 288 pages, \$36.95 (hardcover).

Paraphrasing Lord Wellington, one can say, "The Battle of Britain was won on the flying fields of England." After reading *Buffaloes over Singapore*, I would add, "The Battle of Singapore was lost on the playing fields of Malaya." I would also add—less in jest—that this book is a first-rate primer on how not to fight an air war.

On 7 December 1941, no one "in the know" really expected the Japanese to attack British Malaya, despite their demonstrated aggressiveness in China (1931–41) and French Indochina (1940–41). If they did attack, British Far East Command knew that the four squadrons of newly arrived, American-made Brewster Buffalo fighters, flown by Royal Air Force (RAF), Royal Australian Air Force (RAAF), and Royal New Zealand Air Force (RNZAF) pilots, would soon sweep the Japanese air fleet (1,000 strong) from the skies.

Any air officer above flight lieutenant knew that the Buffalo wasn't a first-class "kite." It couldn't succeed against the Germans or Italians, but Headquarters RAF decided that the Buffalo would suffice against the poorly constructed (canvas and paper), fourth-rate fighters the Japanese flew (according to the RAF's air intelligence). Some of the Buffalo's less seasoned pilots *wanted* the Japanese to attack, thinking that a few easy air kills could only sharpen their combat air skills while they awaited transfer to the European war.

In the meantime, pilots, intelligence officers, and the command staff plotted promotion, partied, and generally enjoyed the "good life." Their complacency ended on 8 December 1941. Four hours before Pearl Harbor felt its first aerial bomb, Japanese naval gunfire saturated northeast Malaya's beaches. Despite the fact that members of the Associated Press had noticed a large Japanese convoy heading south, the British were caught off guard.

Japanese pilots and aircraft were not fourth-rate, as anticipated. Rather, their pilots proved themselves well trained, experienced, and aggressive. Their Zero fighters outsped, outclimbed, and outturned the Buffaloes.

The heavier Buffalo could dive better than the Zero, but for a diving attack, a pilot needed warning time to gain sufficient altitude. British radar deployed in Malaya would have given the Buffalo that advantage, but the radar sets were quickly moved far to the rear, to “protect [their] secret.” Doing so preserved the “secret” but not the slow-climbing Buffaloes or, eventually, British Southeast Asia.

Buffalo pilots who did manage to climb, dive, and survive often found their homes under new management of the Japanese. Panicky airfield evacuations were the rule. Kota Baru, the finest airfield in northeast Malaya, fell to a sniper attack. Nearby Alor Star gave the Japanese 1,000 barrels of high-octane aviation gas and tons of bombs. Such “gifts,” coupled with the excellent pilots who flew the Zero fighters, enabled the Japanese to quickly gain air superiority over all of Malaya.

The British might have regained air superiority after a convoy battled its way to Singapore carrying 51 Hawker Hurricane fighters. Instead of sending the superb Hurricanes into battle en masse, the local air staff used them to replace Buffaloes lost to attrition. On Singapore’s last day of battle, many still-crated Hurricanes ended up being pushed off piers while Buffaloes twisted and turned in combat overhead—even with plenty of pilots available to fill empty Hurricane cockpits. Long after the Japanese gained air superiority over Singapore, the RAF still sent pilots there for training. Unfortunately, the fledglings proved too inexperienced to fly. Apparently, making the training pipeline look good was more important than admitting to Headquarters RAF in London that the air battle wasn’t going well. In sum, *Buffaloes over Singapore* is a first-rate story of second-string pilots flying a third-rate fighter under the command of, at best, a fourth-rate air staff.

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Battle-Tested: Carrier Aviation in Afghanistan and Iraq by Rebecca Grant. Iris Press (<http://www.irisresearch.com>), 236 Massachusetts Avenue NE, Suite 204, Washington, DC 20002, 2005, 187 pages, \$45.43 (softcover).

Rebecca Grant has done it again. This detailed work educates and entertains the reader in an area of aviation with which many Air Force readers may not be familiar. An action-packed history of the use of carrier-based airpower against terrorism targets embedded within Afghanistan and Iraq, *Battle-Tested* not only deals with recent naval-aviation deployments in support of major military thrusts into those countries but also addresses how technology has changed carrier operations since World War II.

An accomplished author, Dr. Rebecca Grant has a proven track record of writing informative, insightful, and useful books for the general military population—specifically those individuals interested in airpower and maneuver forces. She has produced numerous works on other military operations in the Middle East and on the value of military technology (including stealth). Copiously documented (over 600 notes), *Battle-Tested* effectively examines the role of carrier-based airpower in support of political decisions pertaining to military action in Afghanistan and Iraq; it also gives the reader the sense of “being there” in the air and space operations center, in the ready room, on the flight deck, and in the cockpit when our naval aviators were planning, flying, and debriefing their operations sorties.

Dr. Grant’s study would be valuable in the classrooms of Air Force professional military education schools for a number of reasons. Specifically, it illustrates the joint and combined interactions that took place in these major regions of conflict, which are still relevant to our national defense. The book also addresses issues of interest to Air Force policy architects, mission planners, and operations personnel—for example, the value and use of manned versus unmanned systems; ways of effectively combining precision with nonprecision weapons; relationships of Department of Defense (DOD) forces with those of the Central Intelligence Agency; and the nature of Army operations (101st Airborne, 10th Mountain Division, and others) as well as those of other DOD forces. The author also considers the international diplomatic value and political realities of deploying aircraft carriers as a military presence.

Chapter 10, “Strategic Directions,” is particularly noteworthy. Here Grant summarizes how carrier-based aviation has evolved into its present form in the twenty-first-century battlespace. Battle-tested lessons center on strategic issues that the new-age carrier brings to the fight. These lessons represent requirements that current and future decision makers must address if they wish to optimize the contribution of carrier aviation to our national war-fighting capability.

I recommend *Battle-Tested* for the serious student of airpower, the casual reader of current events, and the airplane enthusiast (the latter will especially appreciate the many pictures of flight operations). The embedded airpower of the Navy carrier, in concert with our Air Force assets, makes a significant contribution to military force projection in support of our national political objectives. We need to know what these naval forces bring to the fight, how they operate, and what our decision makers can (or should) do to maximize these forces. *Battle-Tested* gives us this information.

Col Joe McCue, USAF, Retired
Springfield, Virginia

Warriors and Scholars: A Modern War Reader edited by Peter B. Lane and Ronald E. Marcello. University of North Texas Press (<http://www.unt.edu/untpress>), P.O. Box 311336, Denton, Texas 76203-1336, 2005, 320 pages, \$24.95 (hardcover).

Coeditors Peter Lane and Ronald Marcello, history professors at the University of North Texas, have compiled presentations made at eight of the university's 24 annual Military History Seminars, held since 1983 to feed the interest of the north Texas community in military history. The scope of coverage loosely ranges from World War II to the current war in Iraq. The contributors include both professionals—including three historians and a psychologist—and war veterans, the latter authoring nine of the 13 articles. The veterans range from a corporal to a four-star general and an ambassador, so the personal perspectives are quite diverse.

The book is divided into sections of one to three articles. Because Europe and the Pacific receive separate treatment, over one-third of the book (five articles) deals with World War II. Other sections include, naturally, the early Cold War, the Korean War, Vietnam, the late Cold War, and terrorism. As with most compilations, the quality of the articles ranges from excellent to interesting—happily, not one is a dog. Little of the material is groundbreaking, but most of it is informative and interesting, particularly the personal presentations.

The piece by Robert Divine, the most prominent of the historians among the contributors and a giant in the profession for half a century, addresses the decision to use the bomb to end World War II. It is disappointing only because it mostly recapitulates standard material from a consensus-history perspective. It downplays the New Left in-

terpretation that became common in the late 1960s after hanging around the fringes since the onset of the Cold War.

My favorite among the participants, Col Henry Cole, uses a light touch to deal with his time as a rifleman in Korea. The perfect presenter, Cole is a draftee who left the service, got his education, rejoined the Army as an officer, earned a PhD, and published historical studies while serving as an adjunct professor at the Army War College. He also epitomizes the American warrior, at least in this article, taking it all as it comes with a touch of grace and an abundance of humor. Other articles are more serious but not necessarily less effective.

Because the book ranges through so many conflicts, cold and hot, coverage of any era is limited to only two or three articles. Rather than a survey of the topic, *Warriors and Scholars* works more as a collection of conference sessions, defining the conference topic in such a way as to encompass whatever papers are available. On a positive note, each article can stand alone, so the browsing reader need not worry about losing an overarching message.

Lest I seem overly negative, I should stress that this collection contains much that is interesting, even insightful. No matter how much we think we know, we can always learn more from those who were there. Each lived his own war, and each tale can only add to our knowledge of what it was like, a knowledge that can never reach a point of saturation. Those who approach the topic as professionals—detached and scholarly—also enhance our knowledge of the American military experience.

Warriors and Scholars is nicely put together, and the editors have invested a great deal of time and energy in making sure that all necessary explanatory footnotes are in place. The result is a satisfactory work if not one that heads every must-read list.

Dr. John H. Barnhill
Houston, Texas

Old Glory Stories: American Combat Leadership in World War II by Cole C. Kingseed. Naval Institute Press (<http://www.usni.org/press/press.html>), 291 Wood Road, Annapolis, Maryland 21402-5034, 2006, 280 pages, \$36.95 (hardcover).

Although we have various works on leadership during World War II, *Old Glory Stories* by Col Cole C. Kingseed, USA, retired, is refreshing in that, in a single volume, it evaluates combat leadership at the strategic, operational, and tactical levels of war. Moreover, the text goes beyond a mere historical

review of leaders such as Dwight Eisenhower, Douglas MacArthur, and Omar Bradley. Indeed, Colonel Kingseed provides insight into such lesser-known though no less significant warriors as Joseph “Vinegar Joe” Stilwell, Jonathan “Skinny” Wainwright, Lucian K. Truscott, Walter Krueger, and J. Lawton “Lightning Joe” Collins.

However, the book goes beyond a review of leadership at the general-officer level, which comprises “The Generals,” part 1 of the work. In “The Warriors,” part 2, Colonel Kingseed evaluates and educates readers on the exploits of such legends as Col Paul Tibbets, Capt Joe Dawson, Maj Dick Winters, and several lieutenants: Vernon J. Baker, Audie L. Murphy, and Lyle J. Bouck. Of particular interest is a chapter on Maj Charity Adams Early, the first African-American female to command a battalion in the European theater of operations. Like many others, she faced a twin fight—one against the racism of the Army and another against the Axis. Throughout, the author provides a balanced evaluation of the leadership traits, personalities, and challenges encountered by theater and Army group commanders (those in charge of several armies), as well as company commanders and platoon leaders.

Colonel Kingseed follows Eisenhower, MacArthur, and Stilwell from cadet days to the pinnacle of their service, adding to our knowledge of the relationship between the two supreme commanders. Moreover, the author educates us on Stilwell, one of the oft-forgotten theater commanders who led forces in the extremely challenging China-Burma-India theater. While combating the Japanese, the general constantly fought with the Allies over strategy and with the Army for supplies and manpower. As Kingseed notes, “Stilwell was not called Vinegar Joe for nothing” (p. 32).

After analyzing Army group commanders, the author highlights the exploits of Army commanders in the Pacific theater, whom he rightfully categorizes as forgotten warriors. When one thinks of that area of operations, images of fast-carrier task forces and Marine landings immediately come to mind. However, the Army deployed over 21 divisions to the theater (the Marines had six) as well as the Fifth, Seventh, Thirteenth, and Twentieth Air Forces (US Army Air Forces). Needless to say, most Americans (and quite a few Airmen) are unaware of this fact. After providing a detailed account of General Wainwright’s ordeal after the surrender of Corregidor, the book also outlines the leadership of General Krueger, Sixth Army commander, who started in Australia, fought hard-won battles in New Guinea, and then went on to liberate the Philippines. Kingseed also objectively analyzes Lt Gen Si-

mon Buckner, who commanded Tenth Army (consisting of both Marine and Army corps-sized units) during the battle for Okinawa—where he was killed in action.

The book covers “dual-theater” commanders Alexander “Sandy” Patch, J. Lawton Collins, and Charles H. Corlett, who commanded divisions and corps in the steaming jungles of Guadalcanal, New Guinea, Kwajalein, and the freezing Aleutians before joining the campaigns in Europe. Kingseed superbly illustrates the perception of these battle-hardened professionals as “interlopers” by Army leaders in Europe. The author notes that, despite General Corlett’s expertise in amphibious warfare, senior leaders readily dismissed his suggestions (made after reviewing the Overlord plan). One can only imagine what lives might have been saved at Omaha Beach had they listened to the “outsider” with a proven record.

Kingseed spins a fascinating tale of Colonel Tibbets, who exemplifies aerial-combat leadership, before moving on to platoon and company commanders who “led the way.” One learns of Joe Dawson, among the first to clear Omaha Beach on D-day; months later, on a high ridge overlooking Aachen, Germany, Dawson’s G Company, with other parts of the 16th Regiment, held off numerous division-sized attacks—for 49 days. This is just one of the many examples of junior officers taking care of business. The author also documents the exploits of Len Lomell, first sergeant of a Ranger company at Pointe Du Hoc on D-day, and of Lyle Bouck, whose platoon held up the German advance during the Battle of the Bulge for 18 crucial hours.

Furthermore, the book explores a topic that many military historians gloss over—the leadership of African-American warriors in World War II. Although many Americans know of the Tuskegee Airmen, very few have heard of Vernon J. Baker, a platoon leader who served with great distinction in Italy and received the Medal of Honor for his exploits—52 years later. Like Maj Charity Adams, who commanded a service battalion in the European theater, Baker experienced the Army’s institutional racism. Yet, like so many others, these outstanding warriors set the example for *all* Americans to follow. Baker’s courage under fire and Adams’s superb leadership are inspirational; Colonel Kingseed deserves much credit for bringing their stories to light—they are the culminating chapters of the book’s second part.

Clearly, Colonel Kingseed (who earned a PhD in military history) conducted extensive research for *Old Glory Stories*, which is well written and well documented. He recounts the experiences of interview-

ing many of these heroes in person and the ways that experience inspired his writing and professional thought. The author's expertise is evident throughout, especially his objective analysis of the subjects and his handling of the historical context. In sum, *Old Glory Stories* is a relevant, engaging work with lessons for today's Airmen—including those in the senior ranks—on combat leadership, a commodity that remains in demand.

Lt Col Richard Hughes, USAF
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Becoming Eichmann: Rethinking the Life, Crimes, and Trial of a "Desk Murderer" by David Cesarani. Da Capo Press (<http://www.perseusbooksgroup.com/dacapo/home.jsp>), Eleven Cambridge Center, Cambridge, Massachusetts 02142, 2006, 368 pages, \$27.50 (hardcover), \$18.00 (softcover).

Asked to recall some of the more notorious evil-doers from the Second World War, many people would likely think of Adolph Eichmann. Even today, he evokes an unforgettable image of a brutal leader and one of the top Nazi officials at the center of the genocide surrounding the Holocaust's "Final Solution" in Europe. From the late 1930s to the end of the war in 1945, he directed the logistical apparatus of mass human deportation and extinction within vast areas of the Third Reich. As such, he had direct responsibility for transporting two million Jews to their deaths. Obviously, Eichmann fits into the category of an anti-Semitic mass murderer who blindly followed orders, no matter how terrible they were.

But was he really like the rest of the Nazis, and why did he do it? Noted British historian David Cesarani advances these two major inquiries in his insightful biography *Becoming Eichmann*. In conducting the first serious analysis of Eichmann in almost 40 years, the author uses an extensive list of sources (many of them unavailable in the 1950s and 1960s) and research to examine his theories. Cesarani makes a thorough and complex assessment of Eichmann that goes to great lengths in exploring a fundamental question: was this "desk murderer" as bad as history now shows, or was he really just a competent administrator and technocrat who did not realize the magnitude of his genocidal actions?

Tracing his life from its solid beginnings up through the prewar and conflict years, the author paints a complete picture of a fairly normal man caught up in the times and very proficient at carry-

ing out his responsibilities. Eichmann never rose to high levels in the Nazi military hierarchy and was serving only as the equivalent of a lieutenant colonel when the war concluded. But one needs to put this fact into perspective. For example, he participated in the infamous Wannsee Conference in early 1942 when the Nazi leadership decided to set in motion its Final Solution. However, Eichmann's role there was mostly that of a staff officer helping plan the conference and drawing up the minutes—hardly the activities of a key mover and shaker, as portrayed by some. After the conference, it is true that he assumed management of certain related activities having more significance than his later description suggested: "All the work was paperwork." He still managed to fly beneath the radar in many instances, mainly due to his field-grade rank and administrative status.

After the war, Eichmann also escaped prosecution, in part because the victorious Allies did not even know who he was. The Nuremberg trials came and went with little attention paid to him. Eichmann successfully avoided the authorities in Germany for several years and in 1950 went to Argentina, where his family joined him soon after. For the next decade, he blended into the surroundings, living a very modest but secure life in a South American country known for harboring many Nazi fugitives. During this time, Jewish authorities investigating the Holocaust started to uncover the significant role Eichmann had played in transporting victims of the Final Solution. Consequently, these Nazi hunters laid out an elaborate plan to find, capture, and bring him to justice in the state of Israel so he could pay for his actions.

That's exactly what happened in 1961. Eichmann became an unwilling center of world attention when Israeli operatives secretly nabbed him and then flew him back to Israel to stand trial for crimes against humanity. The first "live" global media event, the trial attracted a large audience, many of whom followed it right up to Eichmann's execution by hanging in 1962—considered proper justice for a supposedly ordinary man who became the "genocidaire" of millions of Jews and others before and during the war.

Is the author convincing with his assessment? That remains to be determined, but he presents a powerful argument that will probably cause serious scholars to reassess Eichmann's role during those tumultuous times. Certainly, *Becoming Eichmann* reinforces the idea that one need not be abnormal to become a practitioner of genocide. Stated another way, if an ordinary man such as Eichmann could do what he did, it is conceivable—depending on nu-

merous factors and influences—that others in any given society might be capable of committing the same crimes. Although nothing will appreciably elevate or diminish Eichmann's final standing, it will be interesting to see if a shift in opinion occurs regarding his ranking in the Nazi gallery of despots.

Although not easy to read, Cesarani's study is logically presented, thoroughly documented, exceptionally researched, and enlightening. Dedicated scholars and students of the Second World War and Holocaust will consider *Becoming Eichmann* an important new work.

Dr. Frank P. Donnini, Lieutenant Colonel, USAF, Retired
Newport News, Virginia

Iraqi Security Forces: A Strategy for Success by Anthony H. Cordesman. Praeger Publishers (<http://www.praeger.com>), 88 Post Road West, Westport, Connecticut 06881-5007, 2005, 440 pages, \$49.95 (hardcover).

Readers will most likely approach *Iraqi Security Forces* in one of two ways. They will either set it aside in disgust after reading the introduction or enthusiastically devour it, soaking up every word—as I did.

Anthony H. Cordesman holds the Arleigh A. Burke Chair in Strategy at the Center for Strategic and International Studies in Washington, DC. The author of a wide range of studies on US security, energy, and Middle East policy—as well as more than 20 books—Cordesman has seen his analyses featured prominently in major international media outlets. *Iraqi Security Forces*, the product of his latest research on US policy and actions in Iraq, hits chords that some readers will find unsettling, causing them to shake their heads in disagreement over the author's research, findings, and/or recommendations. Others will think that he is stating the obvious. Regardless, one should take to heart Cordesman's recommendations, located in the final chapter.

I had personal experience with some of the Iraqi security forces programs during my tour at Combined Task Force 7 in Baghdad. During that time, I witnessed opening developments of the Iraqi Civil Defense Corps and the stand-up of the Civilian Police Assistance Training Team. I read with interest Cordesman's comments, comparing them to my own experiences and finding them accurate. Satisfied that Cordesman had done his legendarily thorough job of research, I eagerly read on.

Iraqi Security Forces walks the reader through events dealing with the breadth of Iraq's security forces—its armed forces (most specifically the army,

but he also touches on the air force and navy), police, and other security forces units as they existed during Saddam's regime and after his removal. Cordesman's research begins with the fall of Baghdad and the ensuing chaos as police units collapse, armed resistance turns from full units to a smattering of individuals or groups, and crime and corruption begin to take hold. Summarizing the first 12 months of the US occupation of Iraq, Cordesman criticizes US policies and reports: "The United States not only initially failed to properly assess the growth of terrorism and insurgency during the first year following the fall of Saddam Hussein, but the insurgency also rose and became steadily more effective. . . . While the US training teams and US commanders in the field made steadily better efforts to organize and train Iraqi forces to protect themselves, the United States as a whole concentrated on manpower numbers" (p. 49).

Iraq had more than the insurgency to consider. Crime and corruption had always been a part of Saddam's regime. After his fall, without an effective and visible police force to rein it in, the criminal element in Iraq grew. In some cases, criminals and insurgents worked together when it proved advantageous to both parties. Creation of a replacement Iraqi police force started in mid-to-late 2003, faltered as it faced this wave in crime, and restarted in earnest with the advent of the Civilian Police Assistance Training Team in early 2004. Cordesman notes that "the creation of effective police forces was never a luxury that could wait on defeating the insurgents. Giving Iraq stability and giving the Iraqi government full legitimacy meant that the Iraqi police had to become as visible as possible" (p. 116).

Although Cordesman's research constitutes the bulk of the book's 12 chapters, the final one commands the reader's attention. I found his recommendations solid and well grounded in his thorough research. He reiterates that the United States and coalition must base their reporting of Iraqi security forces on solid metrics and that the reporting must be credible as well as transparent.

Not everyone will agree with Cordesman's research and conclusions; in fact, some may take offense. If nothing else, skeptical readers should at least take to heart his recommendations. There is too much in *Iraqi Security Forces* to ignore. Any reader involved in planning, policy development, information operations, public affairs, or even the execution of future operations similar to Iraqi Freedom must read this book—lest we repeat these mistakes.

Maj Paul Niesen, USAF
Scott AFB, Illinois



Mission Debrief

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